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IT HAS EVERYTHING

That an Experienced Operator Wants in a Drill Pipe Float

THE BAKER BAKWIK
MODEL "B" DRILL PIPE FLOAT & VALVE ASSEMBLY

EASILY INSTALLED VALVE ASSEMBLY
The Valve Assembly is constructed entirely without threads, being merely dropped into place by hand in the Float Joint Body and removed with equal ease.

POSITIVE SEALING
The action of the Back-Pressure Valve is instantaneous and positive with 3-point leak-proof sealing being provided by the use of a Valve Seal and two efficient Side Seals.

VALVE ASSEMBLY QUICKLY AND EASILY SERVICED
When the Valve Seal and two Side Seals become worn in service and need replacement, they can be quickly and easily removed and new ones inserted. This can be done at the rig, and no special tools or wrenches are required. (See Baker Section of Composite Catalog for simple method of servicing Valve Assembly.)

FLOAT JOINT BODY CAN BE RECUT
The normal service life of the Float Body is doubled by designing it to permit a total of two recuts . . . both of which can be made on either the pin or box end; or one recut on the pin end and one on the box end.

STRONG, SIMPLE CONSTRUCTION
The Valve Assembly is constructed of a minimum number of essential parts consisting of materials carefully selected for strength, toughness and the ability to withstand the abrasive action of circulating fluids under pressure.

BAKER BAKWIK DRILL PIPE FLOATS PROVIDE THESE IMPORTANT ADVANTAGES:

Relieve Weight on Derrick and Rig Equipment

Lengthen Life of Wire Lines and Brake Bands

Prevent Plugged Bits and the Annoyance of Wet Strings Resulting Therefrom

Prevent Blowouts Through Drill Pipe

Minimize — Often Prevent Entirely — Any Accident or Damage in Case the Drilling String Should Part

Eliminate Need for a Stop Cock on Drilling String

For Complete Details, See Pages 267-269 of the Baker Section of the 1940 Composite Catalog

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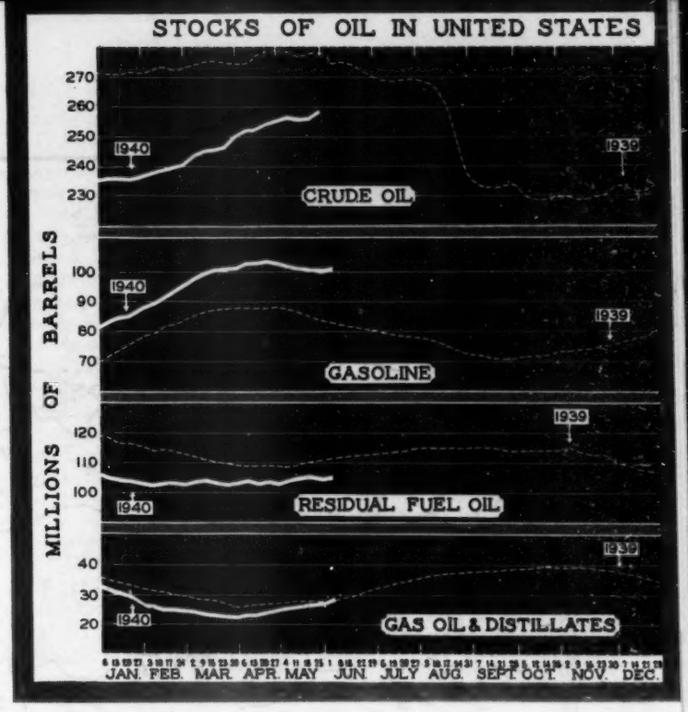
Trends

Recent Decisions Have Bearing in Operating Trend



RECENT decisions of the U. S. Supreme Court are being directly reflected in the operations of the oil industry, with indications of still greater significance in the future. The California industry is faced with the most critical situation in several years. Following the recent Supreme Court Madison case decision operators in that state abandoned an arrangement which had resulted in the orderly distribution of the products of small refiners. As regards crude oil, because the state has no conservation act comparable to those of other oil states, matters pertaining to allowables and conservation have been handled through cooperative action on the part of operators. There is some question as to whether it can be continued.

The dropping of the arrangement in regard to marketing has brought a drastic reduction in gasoline prices applying to the entire West Coast territory. Several small California refineries have been shut down, reducing the outlets for crude oil. While California operators can point to several critical situations with which they have coped successfully in recent years, solutions of present problems appear particularly difficult due to the legal restrictions placed on cooperative action.

CRUDE PRODUCTION *3,747,671 bbl. daily average—down 89,758 bbl. One year ago 3,570,921 bbl.*

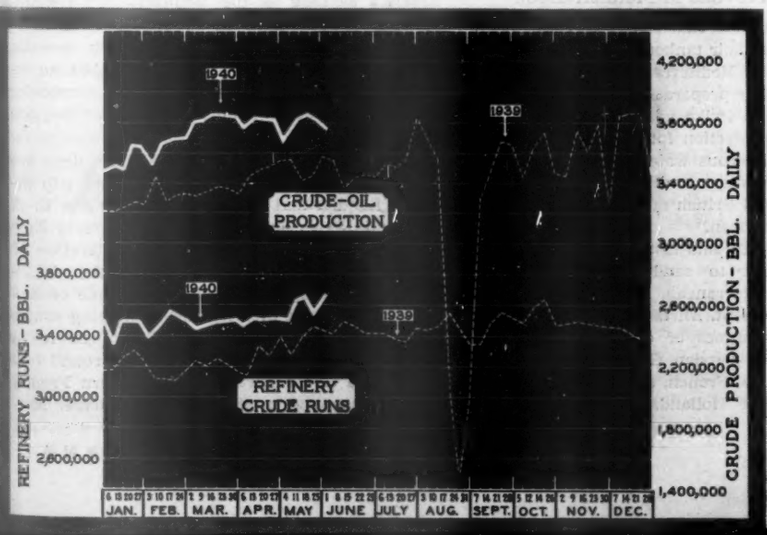
CRUDE STOCKS *259,330,000 bbl. as of May 25—up 1,683,000 bbl. One year ago 278,289,000 bbl.*

GASOLINE STOCKS *100,353,000 bbl. as of June 1—up 56,000 bbl. One year ago 84,200,000 bbl.*

RESIDUAL FUEL-OIL STOCKS *104,768,000 bbl. as of June 1—up 753,000 bbl. One year ago 111,236,000 bbl.*

GAS OIL AND DISTILLATES *29,533,000 bbl. as of June 1—up 1,177,000 bbl. One year ago 27,813,000 bbl.*

REFINERY RUNS *3,650,000 bbl. daily week ended June 1—up 70,000 bbl. One year ago 3,415,000 bbl.*


REFINERY RUNS - BBL. DAILY
CRUDE PRODUCTION - BBL. DAILY
CRUDE-OIL PRODUCTION
REFINERY CRUDE RUNS
1940
1939
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

The same court on Monday again surprised the industry by reversing the decisions of lower courts in the Rowan & Nichols case. The broad general principle in this case was that allowables should be based on oil in place and operators should not be compelled to drill unnecessary wells, as has been the practice in East Texas. In its decision the highest court held that federal courts did not have the right to supplant the Railroad Commission's judgment as to how proration should be applied. While operators had not had time to digest the decision fully the first of the week, it was agreed that it will have wide significance in the application of conservation and proration not only in East Texas but

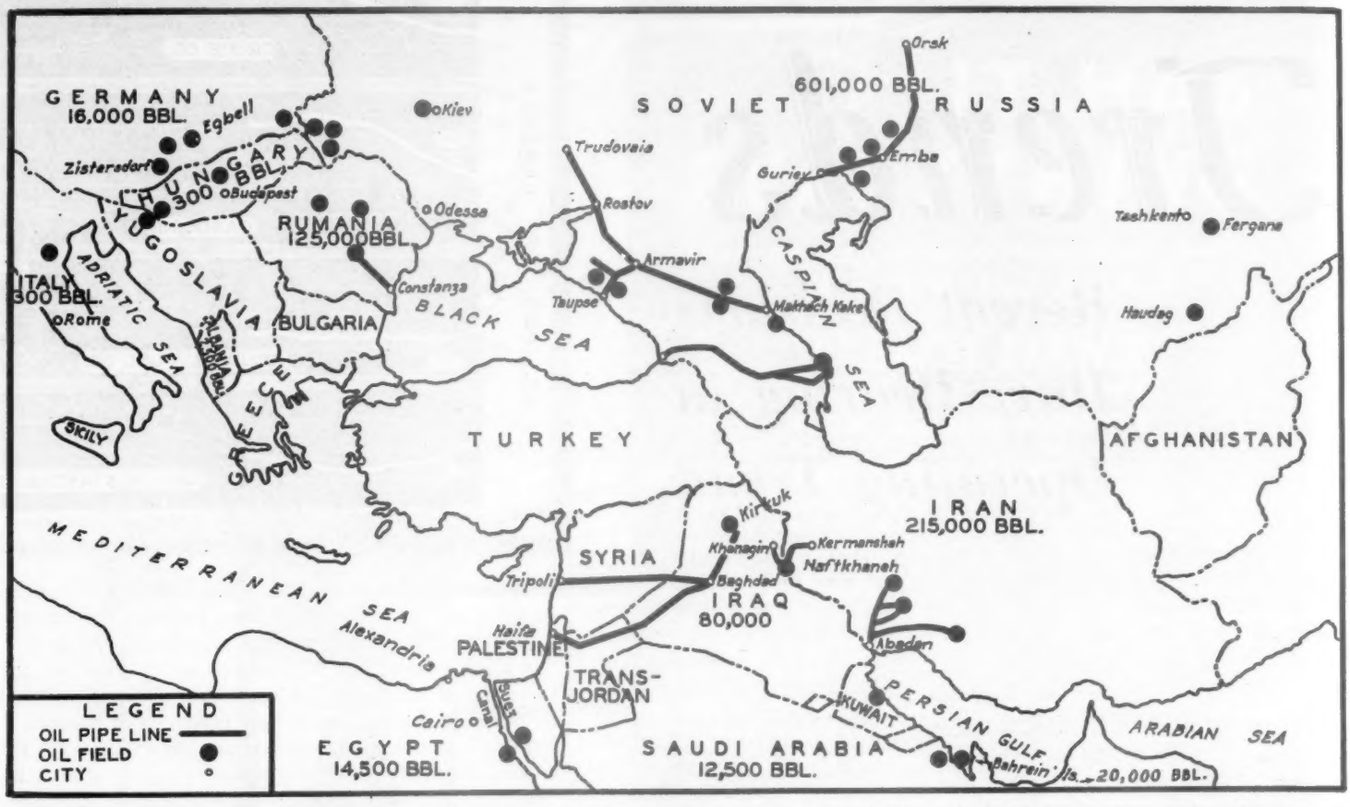
DAILY AVERAGE PRODUCTION FOR WEEK

	June 1, 1940	Bur. Mines June est. of demand	June state allowables	May 25, 1940
Oklahoma City	97,850	.....	.....	99,600
Seminole fields	37,975	.....	.....	38,025
Remainder of state	282,425	.....	.....	285,850
Total Oklahoma	418,250	408,600	408,600	423,475
East Texas	396,591	.....	.....	396,448
West Texas	236,747	.....	.....	263,746
North Central Texas	137,088	.....	.....	145,839
Texas Panhandle	67,453	.....	.....	73,087
East Central Texas	79,056	.....	.....	88,150
Gulf Coast Texas	350,250	.....	.....	386,055
Southwest Texas	97,349	.....	.....	110,399
Total Texas	1,364,534	1,344,600	1,335,530	1,463,724
North Louisiana	70,125	.....	.....	69,765
Gulf Coast Louisiana	237,950	.....	.....	234,397
Total Louisiana	308,075	274,700	280,166	304,162
California	604,500	593,700	592,000	607,300
Kansas	158,850	159,000	.....	160,500
Arkansas	71,905	66,700	70,517	71,555
Mississippi	8,032	7,000	.....	8,728
Eastern fields	107,900	106,400	.....	108,600
Illinois	450,430	395,600	.....	433,732
Michigan	59,165	62,000	.....	59,613
New Mexico	107,650	106,700	.....	107,690
Rocky Mountain area	88,380	95,300	.....	88,350
Total United States	3,747,671	3,620,300	.....	3,837,429

throughout the entire industry. The decision probably will complicate the Texas excess-production problem.

Oil markets continue to be dominated largely by conditions at coastal points. A curtailment of gasoline buying for export instead of the expected expansion in purchases has brought a situation in which domestic buyers have been able to pick up bargains. The fear is expressed that the California development will result in the dumping of excess supplies on East Coast markets.

Observers point to encouraging trends affecting crude oil and refinery markets at interior points. These trends, however, have not been in effect long enough to bring about a general strengthening in gasoline quotations for the summer period.



Crude-oil supplies and pipe-line facilities of the Mediterranean area. Daily average production by countries shown, based on latest available information

Italy's Entry Into War Would Have Wide Oil Significance

By H. STANLEY NORMAN

NEW YORK, June 4.—Threat of Italian intervention on the side of Germany in the European war has so far failed to halt the movement of Allied flag tankers through the Mediterranean Sea. The volume of oil, number of boats and the conditions of movement are all closely guarded secrets with military significance, but it was definitely established last week from unimpeachable sources in New York that Allied tankers are transporting near eastern petroleum to southern and western French ports and to Great Britain.

At least one tanker in the Allied service was listed as a casualty last week in a renewal of Germany's submarine warfare against British and French shipping. The tanker, lost for all practical purposes, was a British boat having a deadweight capacity of approximately 9,000 tons which was beached with her cargo after being severely damaged off the northern coast of Spain by gunfire from a German submarine. Since the tension between Italy and the Allies reached present proportions there have been only two or three tankers permitted to proceed east of Gibraltar. British blockade authorities have tightened their control over movement of goods with military significance to Italian and Balkan ports.

Despite the inferred threats by Italy to soon join Germany in its fight with the Allies backed up by wide-scale military preparations observers are numerous who believe all these actions are merely threats to keep Britain and France from striking at the Reich's rear door. The threat of Italian intervention is perhaps more effective in rendering the Allied forces in the Near East impotent than if the participation was on an active scale.

Caution Prevails in Mediterranean

Extreme caution is said to be exercised by the Allies in moving their tankers and petroleum supplies through the Mediterranean because the extent of Italian war preparation has placed Mussolini in position to strike without advance notice. The necessary protection for Allied tankers moving through dangerous waters is bound to minimize speed of voyages and to spread the power of the French and British naval force held in the eastern Mediterranean.

American oil men said last week they were extremely reluctant to send petroleum cargoes through the Mediterranean, irrespective of direction of the movement. All tankers currently moving west with cargoes of oil from Iran, Iraq, Egypt, and other Persian Gulf producing countries are of British, French, and Norwegian registry. The fleets of Holland, Belgium, and Denmark, in addition to Norway, are under the direct supervision of the Allies, excepting in cases where owners elected to leave their vessels in neutral ports. Several Danish boats are out of service and others are restricting their movements to relatively short trips where exposure to belligerents' vessels is limited at most.

Viewed from an oil man's standpoint there is little prospect for a change in the export requirements for petroleum from this country or South America as long as the Mediterranean remains open. Half interest of the British Government in the Anglo-Iranian Oil Co., Ltd., which operates the producing fields, pipe lines, and Abadan refinery in Iran, makes that the logical source for all possible petroleum supplies as long as they are accessible.

Even though approximately 18 more days are required for a tanker to make a round trip between London and Abadan than from the U. S. Gulf and Netherland West Indies' ports to England there is the more pressing consideration of exchange. Much the same consideration is involved in making Iraq a desirable source of supply as long as the Mediterranean shipping routes remain open. Only 18 days are required for a tanker with average speed to make a round trip from Haifa to the ports on the southern French Mediterranean ports of Frontignan, Berre, Mar-

tigues and L'Avera, where refining facilities are located.

Approximately 52 days are required for a round trip by tanker from Abadan to London, and this stretches to 77 days if the Mediterranean is closed and it becomes necessary to use the Cape of Good Hope route. About 35 days are necessary for a tanker round trip between Curacao and London and about 41 days from the U. S. Gulf ports to London.

Importance of the Mediterranean shipping route to the Allies as an artery for petroleum supplies can be best visualized by considering the production in the Near East. Iran's production is between 215,000 and 225,000 bbl. daily. Iraq is producing approximately 85,000 bbl. daily and Egypt's output is in the vicinity of 14,500 bbl. daily. The combined output of Saudi Arabia and Bahrein Island is about 30,000 bbl. daily. From the gross potential of approximately 345,000 bbl. of oil daily available from the Near East must be deducted internal consumption of producing countries, fuel for operations, normal movement to other markets and losses in arriving at the volume for direct use by the Allies.

Based on 1938 and part of 1939 statistics it is indicated that Great Britain and France combined received approximately 200,000 bbl. daily from the near eastern petroleum supply. Since the start of this year France and Great Britain have been drawing from 35,000 to 40,000 bbl. daily from Rumania. Extending the calculation it is evident that the 235,000 to 240,000 bbl. of oil daily passing through the Mediterranean would be cut off, or at least seriously delayed in delivery if Italy joins Germany in the war.

Balkan Movement Slowed

Strict regulation of the merchant shipping passing Gibraltar by the Allied blockade has doubtless depressed the normal movement of United States petroleum products into Balkan countries. Objective of the Allies is to prevent more than actual requirements of petroleum reaching any of the neutral countries having direct communication with Germany, fearing that any excesses would inevitably reach possession of the enemy. Bombing of northern Germany's petroleum supply centers was continued last week by the British air force, according to London war dispatches, but the successes, if any, in destroying stocks or interrupting movement to the front have been vague claims.

The impression exists among well-informed New York oil men that Italy has no more than a 6-month supply of petroleum in storage. In cutting the Mediterranean shipping lanes by joining Germany, Italy would also virtually close herself within a non-oil-producing ring, it being assumed that Gibraltar will continue to control the western entrance and that the Allied military strength in the Near East is sufficient to protect Iran, Iraq, Egypt, the Persian Gulf and Turkey. Italy at war is in danger of being cut off from Mexican, United States, Rumanian and near eastern petroleum resources which normally supply her entire petroleum requirements, excepting about 3,000,000 bbl. annually from Albania.

Indicative of the Italian petroleum position is the regulation instituted June 1 prohibiting private automobile operation as a motor-fuel conservation measure. Since the outbreak of the European war last September private automobile owners in Italy have secured limited amounts of motor fuel through a system of government permits, similar to the practice in England and France. Abrupt cessation of gasoline permits may have ominous significance for the Allies and has all the earmarks of an emergency measure which would not be used unless the Italian Government has definitely decided to become an active belligerent.

Still another analysis of the function of petroleum in the European war program was presented in New York by V. R. Garfias, vice president of Cities Service Co. From the point of view of petroleum supply and demand the Nazi war program is predicated on the ability of Germany to defeat the Allies this year before the Axis feels the paralyzing effect of an oil shortage, according to Mr. Garfias. The civil and military consumption of Germany, Italy, and Rumania this year will be 116,000,000 bbl., it is estimated by Mr. Garfias on the basis of 1939 requirements. He calculates that the production of petroleum and related products to meet this demand will be only 83,000,000 bbl.

The civil and military consumption by Germany, Italy, and Rumania last year compares with the estimated requirements in the next 12 months, in Mr. Garfias' analysis, as follows:

	Barrels, 1939	Barrels during next 12 months
Germany	62,000,000	70,000,000
Italy	30,000,000	30,000,000
Rumania	15,000,000	16,000,000
Total	107,000,000	116,000,000

To meet these requirements, Mr. Garfias says, the Axis relies on its reserve stocks, which he estimates at 40,000,000 bbl., and on the production of the following countries:

	Barrels, 1939	Barrels next 12 months
Rumania	50,000,000	50,000,000
Germany	20,000,000	25,000,000
Poland	4,000,000	4,500,000
Hungary	800,000	2,000,000
Italy	1,400,000	1,500,000
Total	76,200,000	83,000,000

To provide the Axis in the next 12 months with all Rumanian exportable oil, the following countries must be deprived of all their requirements, which in 1939 amounted to 55,210,000 bbl. for civil purposes only:

Holland, 11,800,000 bbl.; Sweden, 10,650,000; Denmark, 7,200,000; Belgium, 6,950,000; Norway, 5,130,000; Switzerland, 3,640,000; Greece, 2,600,000; Finland, 2,230,000; Hungary, 2,090,000; Turkey, 1,220,000; Yugoslavia, 980,000; Bulgaria, 860,000; total, 55,210,000 bbl.

Rumanian Outlook

New regulations were issued last week by the Rumanian Government to protect its oil fields from sabotage. Reports from Bucharest said that under the new decree no foreigners, except oil-company employes, will be allowed to enter the Ploesti, Constanza, and Giurgiu petroleum zones.

Rumanian employes in the zones will be subject to military orders as if in an army zone, and inhabitants must surrender their arms, munitions, and explosives. The last portion of the decree may be aimed at foreign employes of Rumanian companies who have been rumored assigned to the duty of destroying producing wells in the event of invasion. Experience from the previous war, however, demonstrated that a few cable-tool bits dropped with the pin down can be as effective in destroying the wells as explosives.

It was also reported from Rumania that the government commissioner had evolved a plan for collecting the nation's 11 per cent royalty in oil, rather than in cash, and in that way the country expects to fulfill its trade obligation with Germany to supply a total of 1,600,000 tons of oil or products during 1940. This plan, forced upon the companies according to reports by the Rumanian petroleum commissioner, will involve flow of oil from French and British companies to Germany. The French and British companies produce about 70 per cent of Rumanian oil and control an estimated total of 2,800,000 tons of the exportable surplus (ton = 7.33 bbl.). This leaves only about 1,200,000 tons for export in hands of Rumanian, Italian, American, and other companies, much of which already is earmarked by prior contracts. All foreign companies agreed to pay future royalties in oil, but the British and French balked when the commissioner made this order retroactive to last October 1. They finally agreed to turn over to the government for eventual export to Germany about 45 per cent of the retroactive royalties in oil. This action was at least a partial setback to the Allied effort to absorb every possible barrel of oil moving to Germany.

Italy and Oil

Italy, which is expected daily to become a German ally in the European War, is largely dependent on outside sources for oil supplies.

Its crude-oil production is approximately 3,000 bbl. daily, most of which is produced in Albania.

It has eight refineries with a total crude-oil capacity of 32,500 bbl. daily. While small in capacity several of the plants are modern and complete in their operations.

Subsidiaries of the Shell, Standard of New Jersey, Texas, and Socony-Vacuum and the government-owned A.G.I.P. are the principal refinery operators and domestic marketers. Refinery operators are required to maintain large storage of crude and products sufficient to take care of several months' requirements.

A government-sponsored company operates two hydrogenation plants with a combined capacity of 8,800 bbl. daily to operate with the low-gravity Albania crudes.

For several years the government's policy has been to restrict petroleum consumption by civilians as much as possible in order to conserve supplies for military uses. Prices on gasoline have been higher than in any other European country, with the highest taxes.

In recent weeks civilian consumption of petroleum has been reduced to a minimum through a rigidly enforced permit system.

Peace-time consumption of petroleum was approximately 63,000 bbl. daily of which 60,000 bbl. daily was imported in the form of crude oil for the refineries or as finished products. The Italian navy is the largest consumer with a large fraction of the supplies reserved for the army and aviation.

Petroleum supplies come from several countries with the United States one of the largest suppliers. Its closest sources of supply are Rumania and the Haifa and Tripoli pipe-line terminals located on the Mediterranean delivering Iraq crude. Petroleum exports to Italy from this country last year averaged 17,000 bbl. daily, of which 80 per cent was crude oil. Aviation gasoline and crude oils were of particular importance in shipments of refined products.

SPARKS . . . FROM THE NEWS

BUT NOT NOW: Vacation days are here again, with their swelling demand for the gasoline which they say was once the money product of the oil business.

VERIFICATION NEEDED: If export rumors ever turn into actual purchases, an overnight shortage of gasoline will develop at coastal points. A Gulf Coast exporter says the present ratio of verification of rumors is 1 to 1,000.

WISHFUL THINKING: A writer in the current issue of a national magazine belies the theory that Hitler's petroleum supplies are sharply limited. It's wishful thinking, he warns, to expect a sudden shortage, leaving tanks and bombers stranded.

SUPPORT: The oil industry was among the first to come forth with a pledge of full support to the Government in its program of enlarged national defense. Official action was taken in a resolution passed at the A.P.I. meeting in Fort Worth last week.

ULTIMATUM: Clean up or shut up, cautioned a speaker at a sectional meeting of the oil industry last week. By which he meant to either clean the industry's house of the evils that infest it, or stop squawking at the threat of Government interference.

OILLESS BELLIGERENT: If Italy becomes a belligerent there will be another oilless nation in the war. More than 90 per cent of its petroleum requirements of 60,000 bbl. daily comes from other countries. In recent months it has been a large buyer of aviation gasoline and lubricants in this country.

STILL GOING: Three new pools scattered in three counties are further evidence that the Illinois basin is not at the end of the road in adding to the industry's reserves.

YOU'RE WELCOME: The half cent to be added to the federal gasoline tax will increase an already heavy burden, but if it's really to be used to defend this country's institutions nobody will growl.

$6,000 PER MILE: Reports place U. S. motorists' gasoline-tax bill at more than a billion dollars yearly, or $6,000 for each mile of highway having a surface better than gravel or macadam.

STEPPING OUT: Recent successes in completing big producers and widely extending the old Cement field in Oklahoma have encouraged operators to extend this exploration afar, deep wildcats being started 5 miles north and 4 miles south of proven field.

REWARD: The perseverance of operators who have maintained faith in the productive possibilities of the Forest City basin despite many failures has been rewarded with an oil discovery in northeastern Kansas and a second well, larger than the discovery, in the Falls City, Nebraska, area.

ROCKING THE FOUNDATION: While the oil industry has been centering its attention on what legislative and administrative branches might do, the U. S. Supreme Court has shaken the foundation of the business in recent decisions. The latest was the reversal of the lower court's decisions in the Rowan & Nichols case, announced Monday.

CENTRALIA FIELD, WHICH IS MAINTAINING ILLINOIS PRODUCTION . . .

Saturation Point Not in Sight, Illinois Operators Told

ROBINSON, Ill., June 1.—"We in the automotive industry, and you in the oil industry, have little reason to fear that old bogey of a saturated market so long as every boy and girl in America wants to drive his own car," Neal Nyland, director of advertising, Plymouth Motor Corp., told the eighth annual conference of the Illinois-Indiana Petroleum Association, held here today.

The conference drew oil men from the West, Southwest and East, as well as from Illinois, Indiana, Kentucky and Michigan fields. Over 600 registered.

Mr. Nyland, touching on world events at the banquet where he was guest speaker, said it was the duty of every business man to support national preparedness by preparedness in his own business to keep his employes on the payroll and keep the wheels turning, regardless of events abroad.

He was introduced by Roscoe Adams, assistant vice president of the First National Bank & Trust Co. of Tulsa.

A paper on "Stabilization Through Proper Well Spacing," by D. L. Knowlton, production manager of Phillips Petroleum Co., of Bartlesville, Okla., headed the talks of the day. (See Page 16, this issue.) He emphasized that:

"No problem is the source of all our ills. Taxes threaten our very existence. Low prices for products cast a shadow on our investments. Just which is our most pressing problem is difficult to say. But we may be sure that the problem of unnecessary wells ranks near the top. These problems will be solved either by the laws of economics and the Cole bill, ar they will be solved by careful intelligent planning of the industry itself."

New discoveries in the Illinois basin were far from an "accident," C. J. Hares, geologist for Ohio Oil Co., said in his address. He termed it "an overtime, delayed, normal prospecting for oil" based on careful geologic and geophysical work. "A very few petroleum geologists, working independently and from different directions, were instrumental in bringing about the discovery of these new oil pools."

In summarizing conclusions as to structural knowledge of the Illinois basin obtained from the new fields Mr. Hares said occurrence of oil fields in the very bottom of the basin is "a wrecking fact for long lateral migration of oil."

Walter H. Voskuil, mineral economist of the Illinois State Geological Survey, told the conference the production of 425,000 bbl. a day in the Illinois district, which was producing only 12,000 bbl. 3 years ago, has materially altered market relationships among existing production districts and principal refinery centers. This Illinois oil, he said, has replaced crude from other districts, increased the quantity in storage, and increased refinery capacity in the field. Most significant, he said, was movement of Illinois oil to the refineries on the Atlantic seaboard, caused by the local congestion of crude in the central refining district and a rise in ocean tanker rates to a level above pipe-line costs to the seaboard.

Transportation Differentials

Mr. Voskuil said: "Illinois shipments to the East Coast district were estimated as of April 1 at 20,000 bbl. daily, only 4 per cent of the requirements of the district, but the Illinois production may soon become an important factor in that market.

"Differential in transportation costs in favor of Illinois created by the rise of coastwise tanker rates offers possibilities of continued and increasing runs to the Atlantic seaboard refineries, the limiting factor being pipe-line capacity."

A new and tested method of electrically logging wells while drilling, the result said to be the same as with conventional equipment, was explained by David G. Hawthorne, research engineer for Amerada Petroleum Corp. of Tulsa.

Special drill pipe containing an insulated electric cable is used, with an insulated bit taking electrical measurements of the formations encountered as the bit touches them, providing an immediate correlation and diagnosis of the strata being drilled, a guide to the drilling and coring of an exploratory well for the first time in history.

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Upper right: Prof. Ralph Esarey, Indiana state geologist; T. B. Steele, Illinois manager, Kewanee Oil Co.; David G. Hawthorne, research engineer, Amerada Petroleum Corp.; A. U. McCandless, president, Mahutska Oil Co., and W. S. Corwin, Illinois superintendent, Tide Water Associated Oil Co. Right: A. L. Cashman, manager, land department, Skelly Oil Co., and Carl B. Anderson, geologist, Gulf Oil Corp. Left, below: Dr. A. H. Bell, Illinois State Geological Survey; Merle Becker, auditor, W. C. McBride, Inc., St. Louis, Mo., and Lee Mulvihill, executive secretary, Illinois-Indiana Petroleum Association. Center, below: Bart DeLatt, petroleum engineer, Pure Oil Co.; Dr. M. M. Leighton and Frank H. Reed, Illinois State Geological Survey. Right, below: H. H. Anderson, vice president, Shell Oil Co., Inc.; C. J. Hares, geologist, Ohio Oil Co., and W. S. Kavale, production superintendent, Texas Co.

Stabilization Through Proper Well Spacing

D. R. KNOWLTON

By D. R. KNOWLTON
Production Manager, Phillips Petroleum Co.,
Bartlesville, Okla.*

SOME of our problems are extremely complex. The legal aspects, in defining property rights, have defied satisfactory solution since Titusville. Problems of selection of pumping equipment and problems of pressure maintenance and reservoir control are full of complexities. In spite of all these, the ultimate problem of our business can be simply stated—to make income exceed the cost.

What are these items of cost and income? The principal costs are three: Leasehold, development and operating. Our income is from sales, the sufficiency of which depends upon two factors: Quantity and price.

Our problem as producers of oil is to make sales exceed leasehold, developing, and operating costs in a sufficient amount not only to justify the necessary investment in this particular lease, but also to contribute its share of the cost of drilling failures and condemned leases. The measure of success or failure of an oil operator is in the amount of which income exceeds or is less than cost. These things are fundamental, but I repeat them merely to emphasize that we all have the same problem.

We have but scant control over the price to be received for our product. Frequently we hear the belief expressed that a price increase would stabilize our business. But that is getting the effect before the cause and, to be trite, is wishful thinking. We can't base our business investments on what we wish to be true. We may as well make up our mind that our job is to make money at the present price of crude. The quantity of our current sales is established by regulatory proration in some states and purchaser or pipeline proration in others. The quantity of our ultimate sales is limited to the amount of recoverable oil in the reservoir. In none of these fundamental factors affecting income do we, as producers, have any substantial control. Our hope for stabilization, therefore, lies in reducing our costs.

Cost Factors

Let us analyze the factors which go to make up the costs of an oil-producing property. No lease can be properly evaluated until it is drilled. Leasehold costs are determined as much by nearness or remoteness from production as by any other factor. In the leasing of lands competition between producers is at its peak, as it should be. Certainly there is no method available whereby the business can exercise other than slight control over leasehold costs.

The reduction of developing and operating costs offers the best possibilities for improving the producers' plight. These costs can be reduced and must be reduced if our business is to be stabilized in the near future. Fortunately, we as producers can, legally and in good faith, bring about a reduction in these costs through one simple principle and two simple means:

The one simple principle—to develop reserves with less capital expenditure; the means—wider spacing of wells and unit operation of pools.

The opinion has been expressed both by economists and regulatory authorities, as well as those actively engaged in the business, that unnecessary wells are the chief source of the ills of the industry. Such has been the theme of reports of subcommittees both of the A.P.I. and the I.P.A.A. This matter of well spacing is a combined problem of economics and engineering. In its practical application the problem is more complicated than appears on the surface. Not the least of our difficulties arises from an inability to overcome habits. While it is true that the regular 330-ft. 10-acre locations fit readily into the land-survey systems used in most parts of the country, this is a shallow reason for continuing to follow this pattern and seldom is it economically justified.

Opposing Arguments

In any conflict of ideas where more than just a few people are concerned, extremes on both sides of the question will develop. This is true in the matter of well spacing. We hear arguments from advocates of extremely wide spacing to the effect that the low price of oil requires wide spacing if the industry is to continue to exist. This is not true. The oil business furnishes a product too valuable to society for it to cease to exist. If the claims of these advocates of wide spacing were properly qualified they would hold that wide spacing must be resorted to if the independent operator or oil company with only limited financial means is to continue in the industry. If we continue to space our wells closely the financial strain will mount and the independent oil man will be forced to abandon the business.

On the other hand, the advocates of close spacing contend that it is necessary to follow such spacing in order to get all of the oil in the reservoir. This is entirely a matter of degree. If the fact that 10-acre spacing will recover more oil than 15-acre spacing means that 15-acre spacing should be condemned, then it would follow that the fact that 5-acre spacing would recover more oil than 10-acre spacing should condemn 10-acre spacing and so on ad infinitum.

So we must look between two extremes to arrive at a proper governing rule by which well spacing must be determined. As a business, the governing factor is the amount of net profit possible, but, like all other businesses, the oil industry has an obligation to the public which it cannot disregard. This obligation is very clearly stated by M. G. Cheney, president of the Anzac Oil Co., in his testimony before the Cole subcommittee when he said: "Since our total national reserves of oil from all sources is very large, our present interest in regulating oil production may be based more logically on the conservation of low-cost oil readily producible than solely on our adequate supply for future generations. If we are to thus provide for the economic welfare of the future, it is reasonable that we should consider the economic welfare of the present, including the problem of economic spacing of oil wells."

I am sure you will agree with the logic of Mr. Cheney's statement.

So our problem in the solution of this well-spacing matter is to space our wells so that each reservoir is sufficiently drilled to give an adequate supply of readily available low-cost oil to the public and at the same time develop these reservoirs with few enough wells to permit profit so that the existence of the independent oil man remains out of jeopardy. The solution of this problem is affected by many factors, such as the market for the sale of the crude, the cost of drilling and equipping a well, the source of the energy by which the well produces, and the recoverable oil per acre in the reservoir. You can understand how it is economically unjustifiable to drill wells to a depth of 10,000 ft. on a pattern the same as is justified at a depth of 3,000 ft. This problem is incapable of mathematical solution. Even if it were possible to establish a formula for determining the best spacing program for a certain reservoir, at a certain time, this formula would have little utility, for the reason that in a month or so the value for the variables in the formula would probably be changed completely. All we are able to do toward the solution of this problem is to chart the trends of the price of oil and the shift in market demand of the supplies of crude in new areas and to more prolific wells in old areas in order that we may determine a general course to follow.

Only Temporary Advantage

I have watched this trend for many years. It indicates today more than ever before that operators who want to continue in this industry must spread out their drilling pattern and develop their properties with fewer wells than used heretofore and substitute for the wells saved a more intelligent use of the reservoir energy. In view of our present knowledge of reservoirs, it is unsound to drill more wells than are necessary to adequately drain the pool. The operator who stubbornly forces the unnecessary drilling gains only a temporary advantage; and seldom if ever does he gain enough to regain his investment. But he drags his neighbor through the wringer by forcing him to drill to the same density. In the end the operators all have substantially the same share of the pools' production as they had prior to drilling the added wells. The only telling and lasting effect is that capital investment has increased. It is much like a law suit or a war. No one wins and everybody loses. In East Texas there were upwards of 13,000 unnecessary wells

*Presented before Illinois-Indiana Petroleum Association meeting, Robinson, Ill., June 1, 1940.

drilled at a cost of over 130 millions of dollars These wells do not make possible more production currently or ultimately. Indeed, there is reason to believe that water coning and fingering in the densely drilled areas may have trapped oil so that actually there will be less oil recovered than if the development had been orderly. This 130-million-dollar investment in unnecessary wells had to be amortized. This necessitated producing the field at too rapid a rate, forcing immense quantities of distress oil on the market, thus crippling the entire industry. Although there is probably no way to calculate it, the increased operating cost resulting from excess drilling would unquestionably be a staggering sum.

Encouraging progress is being made in efforts to bring about a general trend toward proper and wider spacing. Its feasibility was first demonstrated in New Mexico and in the great Yates field of West Texas.

As other fields in West Texas were discovered the operators saw the necessity for developing them on wider patterns and the experience gained there gave impetus to the general movement toward wide spacing.

In 1935, Oklahoma amended its conservation law to give the Corporation Commission power to establish drilling units and to require the unitization of small tracts if necessary to make a full drilling unit. This law has since survived two court tests, one of which was carried to the Supreme Court of the United States. Mississippi, New Mexico, Michigan, and Arkansas all have splendid well-spacing statutes and the operators in those states are thoroughly sold on them.

Experience at Magnolia

In the Magnolia pool of Arkansas the production is found at a depth of 8,000 ft. in a highly porous oolitic lime. The reservoir has an effective water drive. Upon its discovery the Conservation Commission of Arkansas established 40-acre spacing units for that field. As a result the 4,000 acres in this field were developed with 100 wells. The daily allowable for the entire field is 20,000 bbl. which is approximately 5 bbl. per acre per day, or 200 bbl. per well. At an allowable of 200 bbl. per day the operators in this field have gratifying payouts and they will recover just as much oil with these 100 wells as could have been recovered had 400 wells been drilled to develop the pool to a density of one well to 10 acres. Because of the 40-acre pattern the pool was developed to the edge in a much shorter time than if 10-acre spacing had been used. Had it been necessary to develop this pool on 10-acre spacing, it would have been a much longer time before the edge of the pool was reached and in the meantime edge properties would have been drained of the oil. It would have taken four times the investment to develop the pool. Since the market outlet is limited by pipeline capacities the allowable per well would be 50 bbl. or at most 75 bbl. per day. Payouts at this rate would be unsatisfactory. Operators would be in an insecure bargaining position in so far as the sale of oil is concerned and the price received would no doubt have been less than it now is. In spite of having invested four times the capital in the pool the revenue could only be slightly, if at all, increased.

Although the State of Kansas has no direct law as to spacing, they have a provision in their proration law which gives very effective indirect control over spacing to the Corporation Commission. In providing for the method of distributing allowable, the Kansas law requires that the acreage attributable to the well be considered. In this respect the law is similar to those of New Mexico and Arkansas and to some of the better field rules in Texas in that for proration purposes the emphasis is placed on acreage rather than on the well. This feature is the secret of success in eliminating unnecessary wells. The Kansas law was adopted in the middle of last year and on September 1 the Corporation Commission promulgated a rule giving full credit to acreage up to 20 acres in the allocation of allowable oil. Between that time and May 1 of this year 72 per cent of the wells drilled in Kansas have been on 20-acre spacing. At the time the Corporation Commission was considering promulgation of rules under the new law the opponents of wide spacing argued that such a rule would retard the drilling of wells which they said was contrary to the best interest of the people. Experience has shown, however, that more wells are being drilled in Kansas today than were being drilled before the adoption of the rule. Wide spacing has increased drilling and has eliminated only the drilling of unnecessary wells. Though this sounds contradictory, it is entirely sound. We should not cease to drill wells or discontinue development of reserves. But these reserves must be developed with less cost. Today the Kansas oil situation is on a sound economic basis. Farmers who have heretofore had to be content with their annual rentals are now receiving royalties. Supply men, realizing that under this new setup each well develops twice the reserve, are readily extending credit for equipping and producing the wells. The independent operators are developing their leases with half the capital investment as heretofore needed. Of course, the result is that instead of drilling half the number of wells the operators are drilling more wells but in doing so are developing about twice as many acres and twice as much reserve as they would have under 10-acre spacing.

Even among the advocates of wide spacing all is not in harmony. The most controversial point concerns the pattern to be followed. Referring again to Kansas we find most of the operators are content to drill in the center of 20-acre rectangles, 1,320 ft. long and 660 ft. wide. The advantage of this is that it provides direct offsets between leases and conforms to the regular governmental surveys. It has the disadvantages, however, of being 1,320 ft. between wells in one direction and 660 ft. between wells in the other direction. Some operators will develop their wells on 20-acre spacing by drilling every other 10-acre spot. This gives a uniform spacing pattern but it has the disadvantage of not providing direct offsets.

Another difficulty which the advocates of wide spacing have met but which has been mainly overcome is hesitancy of operators to enter into well spacing agreements for fear that it might be in violation of some antitrust law. This feeling prevailed generally in Texas at one time. Well-spacing problems were worked out by mutual oral agreements only. This feeling has been overcome, however, and we no longer encounter any difficulty in reducing spacing agreements, otherwise satisfactory, to writing. The feeling prevails yet in Illinois, however, to a certain extent. Recently we attempted to circulate a well-spacing agreement covering an area which we proposed to develop. One large company stated that although it concurred in the spacing plan proposed and would follow it in developing its properties it could not execute the agreement for the reason that its attorneys were of the opinion that a well-spacing agreement might be construed to violate a provision in the Illinois law forbidding contracts for the purpose of limiting production. One of the independent operators who owned leases in the area agreed with the plan proposed but refused to follow it unless all parties affected signed the agreement. Thus we had a situation where a spacing agreement was impossible because one set of attorneys demanded a written agreement and another set of attorneys would not permit its clients to sign a written agreement, although all parties would have preferred to have followed the pattern proposed and would have saved thousands of dollars by so doing.

In this article the author makes a careful analysis of the economic and conservation factors concerned with proper well spacing and unit operation. He reviews the history of the industry's experience with the subject and draws some conclusions that are of particular importance to the industry at this time if it would avoid the pitfalls to profits that attend indiscriminate and too-close spacing.

Problems in Texas

Such a situation seems absurd and I am convinced that there is no foundation for an interpretation which prevents well-spacing agreements. It does, however, forcibly exemplify the necessity for an adequate and friendly oil-control bill.

Texas has given its Railroad Commission wide powers in the matter of regulating the production of oil. Although we have our differences we must admit that the Texas Railroad Commission has a very difficult task. In most parts of Texas the land surveys are small and irregular, making it very difficult to work out spacing patterns which do equity to all operators and all leases. Being sure of the fact that too many unnecessary wells were being drilled they have amended their spacing rule to require special permits unless the wells be located in the center of square 20-acre tracts or unless special field rules for the pool have been adopted by the commission. This serves as an inducement to the operators to come to the commission, and recommend orderly and economically justifiable field and spacing rules.

In order to adjust for some of the unequal spacing which results from any spacing rule and in order to make the allowable more nearly proportional to the oil in place, they have, in most fields established acreage as the predominant factor in the proration formula. According to a recent check which we made of Texas field rules there were 69 which provided for 10-acre spacing, 83 which provided for 20-acre spacing, and 21 which provided for 40-acre spacing. This shows that the majority of operators are thinking in terms of 20-acre spacing, whereas only a few years ago 10-acre spacing was almost universal. Also, 40-acre spacing is used in many pools where it is justified.

Where the opportunities of one to capture oil under the lands of another have been minimized by regulatory proration, with acreage a factor, the unnecessary wells are not drilled. This, of course, is the method which Kansas, Arkansas, and New Mexico have used to eliminate their spacing worries. I imagine that some of you have the feeling that you would prefer to get along without the aid of regulatory authorities. I am not

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A.P.I. Lends Support To Defense Program

By W. T. ZIEGENHAIN

GEORGE A. HILL, JR.

FORT WORTH, Tex., May 31.—The U. S. Government in its program of enlarged national defense was assured the full support of the petroleum industry through the unanimous action of 32 members of the board of directors of the American Petroleum Institute which concluded its semiannual meeting here today. The board's action was concrete evidence of the wide interest in national defense apparent throughout the meeting which was attended by 1,500 oil men from all sections of the country. The registration was the largest of the Institute's 10 semiannual meetings.

"The American petroleum industry pledges its full, complete, and voluntary cooperation with the Government of the United States, and with all agencies of the Government, in the furtherance of national defense and security," the resolution stated. "The resources, the facilities, the services, and the personnel of the industry can be voluntarily and effectively mobilized in a cooperative program of government and industry for national defense, and the industry pledges, with confident assurance, its ability to furnish a complete, adequate, and continuous supply at all times, wherever desired, of petroleum and its products, to the fullest requirements of the military and naval establishments of the United States, as well as the industrial and civilian requirements of the nation."

The board of directors also approved in principle a pending amendment to the National Defense Act authorizing a special militia to be known as the National Industrial Defense Corps. This act, on which hearings are to be held immediately, has the strong support of George A. Hill, Jr., vice president of the Institute. Mr. Hill is president of the Houston Oil Co. and has been active in the movement which resulted in the bill being introduced. Regarding this bill the Institute's resolution said: "In order to combat the conditions portrayed by the president in his public address to the citizens of the United States on the evening of May 26, 1940, and in order to afford an opportunity for innumerable American citizens to make a real, practical contribution to effective national defense, the American Petroleum Institute approves in principle the pending amendment to the National Defense Act, introduced by U. S. Sen. Morris Sheppard, of Texas, and authorizing a new special militia in the War Department to be known as the National Industrial Defense Corps."

As explained last week the board of directors approved a recommendation of the Institute's executive committee rescinding its action of April 19, 1938, creating a committee on public relations. Under this action all public-relation committees and the organization resulting will be dissolved immediately. The board also adopted a resolution thanking the Fort Worth Chamber of Commerce and others who acted as hosts to the Institute. The chamber was host to approximately 1,800 oil men at a dinner and entertainment given Wednesday night at the ranch of Amon G. Carter, Fort Worth publisher.

General Hulen's Address

The needs of national defense were brought to the attention of several hundred oil men at a luncheon Wednesday, by Lt. Gen. John A. Hulen, retired, of Fort Worth. General Hulen, who served with distinction in the World War, was introduced by Mr. Hill as one of the outstanding authorities on military affairs in this country. Mr. Hulen approved of the bill providing for the N.I.D.C. He said, in part:

"I am glad to have this opportunity to talk to you about national defense and the bill proposed by George Hill and others to amend the National Defense Act by creating a National Industrial Defense Corps. This bill has been introduced by Senator Sheppard in the U. S. Senate and is now being considered by its military-affairs committee. What it attempts to accomplish is the very first thing that we ought to do, even though we are not in a war emergency, for, if we put off such a thing we might find ourselves occupied with so many other emergency problems that this one would not be handled in the most efficient way.

"We have all seen what great service the 'fifth column' has been to Germany in every country it has invaded up to this hour. Due to the political makeup of Czechoslovakia, Poland, and Norway, it was easy for the Germans to find favor with certain classes opposing the government in these countries, particularly so where there was a very considerable German population. Germany has been preparing for this war 20 years, and very actively so for the last 6 or 7 years, and had accurate information and a very considerable inside support in taking over these countries. The same is true, to a somewhat less degree, in Belgium. However, the Belgians were almost evenly divided in their political views. There was a question for a time whether they would side with the Germans or with the Allies.

"The political condition in all these countries, as well as France and England, contributed largely to the failure of these countries to appreciate the efforts being made by Germany to carry out the plans laid down by Hitler until the gravity of the situation appeared, when it was too late to make full preparation to meet the emergency.

"We have a very large foreign population from many countries. Many have no interest whatever in our country, further than to reap whatever benefits they may, and who maintain their allegiance to their home countries. These are ripe subjects for enemy spies, saboteurs, and 'fifth columnists.' The bill that George Hill and others have proposed seems to me to provide a way to fully investigate such persons and in an orderly way nullify the designs of an enemy espionage net and of enemy sympathizers."

BILL

For Creation of National Industrial Defense Corps in United States

An Act to Amend Chapter 5 of Title 32, U.S.C.A. of the Acts of June 4, 1920, Chapter 227, Subchapter 1, and the Act of January 21, 1903, Chapter 196, Section 4, by Adding Thereto Section 81-b.

Declaration of Purpose:

It is the declared purpose of this act to provide for a defense of the home front in time of war and prior thereto, to prevent interference with the Government's program in preparing for defense, and to give adequate protection to all industries of every nature now or hereafter declared to be essential to national defense; to discover and combat subversive and treacherous activity, and for this purpose to constitute a special, limited service component of the national militia to be known as the National Industrial Defense Corps.

Therefore, Be It Enacted by the Congress of the United States:

Section 81-b.—Whenever the president shall deem it necessary to the national security, he is authorized and empowered to designate an industry or industries as being essential to the national defense, and he shall have the power in time of peace to accept enlistment of men employed by or occupied in such essential industries for such period of time as he may from time to time prescribe under the following conditions:

(*a*) Such component of the national militia shall be known as the National Industrial Defense Corps. (hereafter for brevity referred to as N.I.D.C.) Every person enlisted and accepted in N.I.D.C. shall be a citizen of the United States; shall be above the age of 21 years; and shall be employed by or occupied in an essential industry as declared by the president.

(*b*) Application for enrollment shall be made under oath, and shall be accompanied by proof of qualification as to character and employment certified to by a responsible officer or official of the applicant's employer, and such application shall be subject to acceptance or rejection by a reviewing authority appointed for this purpose, and, if accepted, a certificate to this effect shall be furnished the applicant, which application and certificate shall constitute the applicant's enrollment in the N.I.D.C.

(*c*) The members of the N.I.D.C. shall have the right to bear arms and shall have the authority now granted to U. S. Marshals, but only to the extent and in the manner as may be from time to time prescribed by or under the authority of the president, and all arms to be utilized by the members of the N.I.D.C. shall be registered as to caliber or gage, type of weapon, the manufacturer and serial or identifying number.

(*d*) No compensation shall be paid by the United States Government to members of the N.I.D.C., nor may its members be required to serve beyond the area prescribed in the member's certificate, or, within such area, be called upon to carry out any duties as would materially interfere with the member's employment as stated in his application.

(*e*) The president may assign to duty with the N.I.D.C. any officer on the active or inactive list of the Regular Army, the Navy, the Marine Corps, the National Guard and/or the Officers' Reserve Corps, and an officer of the Regular Army in each corps area shall be designated as an officer in charge of N.I.D.C., whose duty under the corps area commander shall be to provide for cooperation between the members of the N.I.D.C. within their local area; to instruct the members of N.I.D.C. in their voluntary duties and to provide for them plans for carrying out their objectives in detecting and reporting acts of sabotage and sedition and in suppressing armed insurrection against the Government; and to provide for reports upon the activities of N.I.D.C. within the area and afford liaison and cooperate with the Federal Bureau of Investigation, local peace officers and other appropriate agencies of the Government.

(*f*) A member of the N.I.D.C. shall not be exempt by reason thereof or because of anything contained in this act from being drafted into the federal service under any selective service act now or hereafter in existence. Upon voluntary enlistment or other form of induction into the military or naval service of the United States, membership in this body shall at once terminate.

Newly elected officers of the National Oil Scouts and Land Men's Association who will take office July 1: (Seated)—C. J. Bradley, Texas Co., Tyler, Tex., president; H. L. Eversberg, Shell Oil Co., Inc., Baton Rouge, La., first vice president; R. H. Weaver, Sun Oil Co., Jackson, Miss., second vice president, and R. L. Denton, Magnolia Pipe Line Co., Kilgore, Tex., secretary-treasurer. (Standing)—C. P. Chisholm, Pure Oil Co., retiring president; E. J. Raisch, Austin, Tex., reappointed executive secretary, and W. E. Tracy, Ohio Oil Co., chairman, executive committee

Oil Scouts Adopt a New Constitution and Code of Ethics at Annual Meet

By GEORGE WEBER

HOT SPRINGS, Ark., June 1.—Adoption of a new constitution and bylaws highlighted the seventeenth annual convention of the National Oil Scouts and Land Men's Association meeting here May 30, 31 and June 1. A new code of ethics was also adopted.

The opening session featured four addresses. Gov. Carl E. Bailey, scheduled to deliver the address of welcome, was prevented from attending due to conferences in Little Rock with his newly appointed committee studying natural resources in relation to national defense. O. C. Bailey, of El Dorado, chairman of the Arkansas Oil and Gas Commission, welcomed scouts and land men to Arkansas' first National Oil Scouts convention.

In outlining "Oil Development in Arkansas," Col. T. H. Barton, president of Lion Oil Refining Co., El Dorado, drew the attention of Illinois men present to Arkansas' early oil history, when flush production at Smackover and nearby fields brought the state's production to a peak of unlimited flow, only to taper off steeply until discovery of the state's current deeper production. Colonel Barton praised the administration of the Arkansas Conservation Act by commissioners and engineers, and credited them with control and prevention of repetition of the state's earlier production history.

He said 78 per cent of the gasoline consumed in Arkansas is refined in the state, and credited the petroleum industry with the highest wage rates in Arkansas. He drew attention to the enormous levies made on the petroleum industry in this country, but in mentioning possible new taxes, stated that if they were needed for national defense, they would be willingly assumed.

In outlining Arkansas' future development, Colonel Barton reviewed discoveries of the past 3 years to illustrate that drilling to new depths brings back exploration campaigns. From 31 geophysical prospects he predicted new fields in light of past experience, and reported a new field had been discovered only the day before on one of these prospects. In South Arkansas he pointed out possibilities of finding production below the salt at greater depths, and in the northern section of the state he cited the added gas reserves and the chance for finding oil. Increased leasing and wildcatting was predicted for eastern Arkansas.

Ley Stresses Cooperation

Henry A. Ley, immediate past president of the American Association of Petroleum Geologists, discussed cooperation among the several groups engaged in exploration. He suggested the same synchronization and cooperation continue between geologists and scouts, as among all groups in the exploratory division, but he did not advocate organization of all the units into one association.

Mississippi Discussed

Joe Dawson, consulting geologist of Jackson, Miss., gave the scouts a comprehensive picture of the current Mississippi development. He outlined the general geology of the state, discussing the Mississippi Basin and the Yazoo arm, and correlated the productive horizons in that state and those in Texas. The Selma chalk, the Eutaw formation, comparable to the Austin chalk in Texas, and the Tuscaloosa formation, similar to the Woodbine in Texas, were cited as the three horizons with best prospects for production in Central Mississippi, while Paleozoic formations were noted as possibly productive in the northeast section of the state.

He pointed out the importance of the oil discovery at Pickens, a small geophysical prospect, which proved that prospects with slight uplift will produce as well as those with large structures, as Tinsley and Jackson. He advanced the opinion that most of the wildcats currently drilling in the state were poorly situated on prospects, which may possibly explain the lower discovery rate than was expected in drilling geophysical highs.

The role of geophysics in the state's development was brought to attention. During the past several months over 50 per cent of the geophysical activity in the entire nation has been carried on in Mississippi. The use of the gravity meter in preliminary exploration was explained since that type of instrument indicated all structures, and, in some cases, structures which were nonexistent. A check with seismographic shooting after gravity prospects are located serves to better locate the structure.

With 3,000,000 acres under lease prior to Tinsley's discovery late last summer, and over 10,000,000 now leased, the current drilling activity will continue for many months, Mr. Dawson stated.

Officers Elected

At the business meeting, Saturday morning, considerable thought was given to adoption of the new constitution and bylaws and the new revised code of ethics.

C. J. Bradley, Texas Co., Tyler, Tex., was elected president, succeeding C. P. Chisholm, Pure Oil Co.; H. L. Eversberg, Shell Oil Co., Inc., Baton Rouge, La., retiring chairman of the executive committee, was elected first vice president; R. H. Weaver, Sun Oil Co., Jackson, Miss., was elected second vice president, and R. L. Denton, Magnolia Pipe Line Co., Kilgore, Tex., was reelected secretary-treasurer. W. E. Tracy, Ohio Oil Co., Bridgeport, Ill., is the new chairman of the executive committee and editor of the next Scouts Yearbook.

Cochairman of the convention committee, in charge of the seventeenth annual convention were: M. C. Hoover, Shell Oil Co., Inc.; C. H. Geiger, Standard Oil Co. of Louisiana; Jake Brandt, Texas Co.; W. R. Cox, Texas Co.; A. M. Crowell, director, Arkansas Oil and Gas Commission; H. L. Norris, Sinclair Prairie Oil Co.; Nolan Rushing, Alice Sydney Oil Co., and J. B. Storey, Union Producing Co.

Cochairmen of the convention committee: (Seated)—W. R. Cox, Texas Co.; M. C. Hoover, Shell Oil Co., Inc.; J. B. Storey, Union Producing Co. (Standing)—Nolan L. Rushing, Alice Sydney Oil Co., and Harry Norris, Sinclair Prairie Oil Co. Other members not shown were C. H. Geiger, Standard Oil Co. of Louisiana; J. B. Brandt, Texas Co., and A. M. Crowell, director, Arkansas Oil and Gas Association

STATE CAPITALS...

TEXAS

WELLS TO THE NUMBER OF 92,260 were included in the Texas Railroad Commission's proration schedules at the beginning of the 3-month proration order which became operative on Saturday, June 1. Last week's completions will be added this week.

The Oil and Gas Division figured that from the week ended May 25 the new order had reduced the net daily allowable by 79,680 bbl., cutting it 10,540 bbl. under the Bureau of Mines' forecast of a market demand for 1,344,600 bbl. of Texas crude daily this month. Last week it was 89,540 bbl. in excess of the demand figure.

Deduction of underproduction at 3 per cent of the allowable, or 40,022 bbl., would lower the average to 50,562 bbl. under the federal estimate. The commission predicated the order upon the anticipation that underproduction would provide a margin to absorb additional allowable necessitated for new wells.

The division's figures show that West Texas received the greatest reduction in average daily quota compared to the previous week. It was cut 26,117 bbl. to 210,350 bbl., or more than 10 per cent. On a percentage basis, the reduction in the Panhandle ranked next as it was trimmed 10,415 to 62,158 bbl. daily average.

New daily average allowable and reductions from the preceding week for other districts were as follows:

Gulf Coast, 219,190 bbl., cut 18,330; Southwest Texas, 236,565, cut 11,272; East Central Texas, 79,832, cut 6,420; East Texas, 368,000, cut 10,387; West Central, 49,540, cut 4,328; and North Texas, 108,425, cut 12,411.

ENTRIES FOR RAILROAD COMMISSIONER increased to 14 when a surprise filing was made by John Pundt of Dallas, an unsuccessful candidate for the place 6 years ago against Commissioner Lon A. Smith, who is not seeking reelection. Mr. Pundt presented his filing shortly after Colonel Thompson formally entered the governor's race. Mr. Pundt, an oil man, polled 400,000 votes in his 1934 race.

Others formally filing for commissioner Saturday were Rep. Sam Hardin of Prairie Hill, who has been campaigning for some time; Baker Saulsbury of Amarillo, Pierce Brooks, and John Paul Jones of New London.

Former state Sen. George C. Puri said Saturday he was considering making the race for railroad commissioner and that he would reach a decision soon. Larry Mills, who has made several campaign speeches, was expected to file this week.

CALIFORNIA

CRUDE-OIL CURTAILMENT in California was still functioning at the close of last week but the industry should keep close tab on developments during the next 30 days. There is no general movement away from the program at present, but there appears to be a feeling that beneath the surface certain developments are taking place that might precipitate a general breakdown. The amount of crude in the spot market has shown a substantial increase during the past 2 weeks and if this becomes too great it is bound to bring about a serious crisis. The amount now being sold beneath posted prices is still too small to affect the entire picture, but it will not take much more to make an impression. Some operators believe that marketing conditions in the refined-oil market will result in a still weaker market for crude oil but this is a matter of conjecture. The present psychology is a defeatest one and the philosophy today is to sit tight and see what happens. The question naturally arises as to how long a refiner can sit tight without any money coming in. A few weeks before collapse of the gasoline pool independent refiners moved considerable gasoline to resellers during an attempt to increase retail prices. These stocks have not yet been consumed and it remains to be seen what action will be taken to meet general competition.

KANSAS

DISTRICT JUDGE ROSS McCORMICK on May 27 dissolved temporary restraining orders preventing two operators in the Burnett pool of Ellis County from producing crude oil on their properties. The action was taken at the request of Republic Natural Gas Co. and Earl F. Wakefield, Wichita operator, against whom the temporary orders were issued May 13.

The orders were issued at the request of the Dickey Oil Co. and C. U. Bay of Bay Petroleum Corp., who contended the two operators had overproduced Corporation Commission allowables by about 100,000 bbl. and were draining oil from their properties.

In dissolving the orders, Judge McCormick commented that the "relief sought by the plaintiffs should first have been sought through the Corporation Commission."

NEW MEXICO

NEW MEXICO OIL CONSERVATION Commission set the state's allowable production for June at 106,700 bbl. daily, the same figure as estimated for demand by the Bureau of Mines. The bureau estimated May demand at 103,900 bbl., but the state raised the figure to 107,000 bbl.

LOUISIANA

THE NEW ADMINISTRATION'S organization bill before the Louisiana Legislature provides for the separation of the minerals division from the Conservation Department and its union with the state Mineral Board. The two bodies, as one, will have exclusive control over all state-mineral development and the leasing of state lands totaling 180,000 acres of unleased land in the state for oil and gas exploration. The administration tax program includes proposed levies on natural gas and other state natural resources.

FORMER GOV. RICHARD M. LECHE was convicted in federal court at Alexandria on June 1 of using the mails to defraud.

The jury found the former executive, who was governor until June 26, 1939, guilty as charged in the indictment which alleged he received $31,000 in the state's purchase of highway trucks in 1937 and 1938 at excessive prices.

O. John Rogge, assistant United States attorney general, who conducted the Government's case, called this money part of the $500,000 "loot" which Mr. Leche allegedly received while chief executive from May 1936, until last year. Mr. Leche had denied he received this $31,000 but testified in his own defense that his income since 1936 approximately $500,000.

Mr. Leche was on the stand about 2 hours. Information concerning his income was educed by Mr. Rogge.

At one point Mr. Leche said he got $67,000 in an oil deal, and had received more than $200,000 in a gas deal. He claimed these amounts were legitimate commissions, but admitted he invested no money in the enterprises.

Mr. Rogge said Mr. Leche's income tax returns showed these gross incomes: $13,180.53 in 1933; $14,871.26 in 1934; $29,000 in 1935; $90,000 in 1936 (the year he became governor); $64,711.03 in 1937; $70,726.21 in 1938, and $282,059.40 in 1939.

OKLAHOMA

W. J. ARMSTRONG, chief conservation officer of the Oklahoma Corporation Commission, Saturday tendered the services of his entire department to state or local defense councils "for any duty that might be required of them."

This force includes conservation officers with experience in all of the oil fields of the state and gasoline inspectors in every county of the state. More than half of the male personnel has had some form of military experience or training.

Under the present proration law (H.B. 481) members of the proration unit are classed as peace officers and permitted to carry arms. No deputy has ever been armed, however, Mr. Armstrong said.

"We have authority to go on any oil property in the state for investigations," he said. "Our men may make arrests, and our department may prosecute any act which tends to cause waste of oil and gas—that will cover sabotage."

OHIO

AN ACT TO PERMIT the introduction of water or other liquids under controlled pressure into wells for the purpose of recovering crude oil was passed and signed by Gov. John W. Bricker.

Section 898-188c provides that "The owner or operator of any well or wells within Ohio which produce oil or gas shall be permitted, upon the written approval of the chief, Division of Mines, to allow such well or wells to remain open for the purpose of introducing water or other liquid pressure under control, upon and into any oil-bearing sand for the purpose of recovering the oil contained therein, and shall be permitted to drill additional wells for like purposes, provided that the introduction of such pressure or other liquid into said oil-bearing sand shall be controlled from the ground surface only and shall be through casing or tubing which shall be anchored and packed so that no other oil or gas-bearing sand and fresh-water strata, above or below, shall be affected by the introduction of such controlled pressure. Such approval of the chief, Division of Mines, shall not be granted unless said owner or operator submit a map of proposed operations designating the area and sand to be flooded. Such map shall comply with all the requirements of Section 898-184 of the general code and shall designate the sand and show the location and depth of all existing wells and the location and probable depth of all proposed wells within the area to be flooded, and, if possible, the location and depth of all producing wells on adjoining farms with a description of the production of each well, whether or not oil or gas, and the sand from which said oil or gas is produced, and also a statement giving the names and addresses of the owners of and well operators on all adjoining leases. The chief, Division of Mines, shall give written notice to the owners or agents of the adjoining lands and the adjoining well owners or agents of the application for water-flooding permit. Any such owner or agent shall have 10 days' time in which to file objection to the granting of such application. If such objection is filed, the owner or agent shall furnish to the chief, Division of Mines, such information pertinent to the objection as he may request to enable him to rule upon the application. The chief, Division of Mines, shall not in any case grant such approval if it can be shown that damage to gas wells or the potable water supply will result by the introduction of water or other liquid upon the same for the purpose of oil recovery. All water-flooding projects shall comply with Sections 898-180 and 898-187 of the general code."

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

No Surrender

The decision of the American Petroleum Institute board of directors to discontinue the public-relations program should not be interpreted as meaning the end of the public-relations work of the oil industry.

The program dropped covered only the enlarged plan inaugurated 2 years ago. The regular public-relations work of the Institute will continue and the program of the American Petroleum Industries Committee, concerned chiefly with tax measures, will not be disturbed in any way.

In regard to the enlarged program, there have been disagreements as to how far the industry can go without being in conflict with national and state legislation affecting labor and certain phases of industrial activities.

Recent decisions of the U. S. Supreme Court applying to cooperative efforts which in any way affect prices have also contributed to the confusion as to what can and what cannot be done.

Codes of fair-trade practices offer little aid in this situation. While the law has not been abrogated, industries generally are not adopting new codes or expanding those established several years ago. The feeling is that effective use of these codes would be frowned upon by Washington.

In view of these conditions the Institute was probably wise not to continue the expansion of its program until such time as the Government has made clear just what its position is on matters which directly or indirectly affect the relations of industry to its customers and employes.

This latest development should not cause oil men to throw up their hands and complain that they are forbidden to do those things which establish good will between themselves and the public.

The most outstanding results in these matters have always been obtained through the individual action of companies. Many companies have been doing effective work by calling attention to the achievements of their own organizations, or of the industry generally, and there is no reason why this practice should not be continued.

Concerns which are using the newspapers, radio, movies and other media in telling the public about their business and the industry of which they are a part have been agreeably surprised with the reactions. Consumers were glad to know about operations which play such an important part in their daily living.

There is increasing evidence that the public generally is awakening to the fact that modern industry fully appreciates its obligations—that the monster in fact may be the accuser not the accused.

Furthermore, recent developments at Washington and the state capitals have had their encouraging aspects.

Efforts to rally support from consumer states for the pending Cole oil-control bill have been unsuccessful, as have been all similar efforts in recent years. This reflects the fact that the mail of congressmen and senators includes few complaints regarding the oil business.

This, of course, is due to the fact that there is no reason for complaints, a direct reflection of the continuing accomplishments of companies operating independently.

The low price of products, the quality of which is constantly improved, superior service in retail merchandising, and the industry's exceptional consideration for its employes are in effect a public-relations policy which the industry's enemies can not overcome.

There are still many things to be done in presenting the industry's case to the public but it has the groundwork established and need not be unduly alarmed while it waits for more favorable times to present its complete case.

U. S. Supreme Court Upholds Texas Railroad Commission

THE U. S. Supreme Court by a 6 to 3 decision Monday upheld the Texas Railroad Commission's August 29, 1938, proration order which had been challenged by Rowan & Nichols Co. which contended that its allowable of 22 bbl. daily disregarded its rights to oil in place beneath its leases. The federal District Court had enjoined the commission from enforcing the rule against the company and the fifth Circuit Court of Appeals upheld that injunction.

Meanwhile on June 19, 1939, the commission issued a new order which was attacked by Humble Oil & Refining Co. and by Rowan & Nichols Co. A three-judge court decided the order was confiscatory because too little consideration was given to wells in the same classification. This new order was not applied to the Rowan & Nichols properties involved in the first order and suit. After disposing of the first case the Supreme Court Monday noted probable jurisdiction in the Humble case and arguments will be held next fall.

Justice Frankfurter delivered the opinion in the Rowan & Nichols case, Justice Roberts writing a dissenting opinion in which Chief Justice Hughes and Justice McReynolds concurred.

The majority decision said in part:

"A controversy like this always calls for fresh reminder that courts must not substitute their notions of expediency and fairness for those which have guided the agencies to whom the formulation and execution of policy have been entrusted.

"Both the District Court and the Circuit Court of Appeals appear to have been dominated by their own conception of the fairness and reasonableness of the challenged order. For all we know, the judgment of those two lower courts may have been wiser than that of the commission, and their standard of fairness a better one. But whether a system of proration based upon hourly potential is as fair as one based upon estimated recoverable reserves or some other factor or combination of factors, is in itself a question for administrative and not judicial judgment.

"Certainly in a domain of knowledge still shifting and growing and in a field where judgment is therefore necessarily beset by the necessity of inferences bordering on conjecture even for those learned in the art, it would be presumptuous for courts, on the basis of conflicting expert testimony, to deem unsound the view of the administrative tribunal, acting under legislative authority." In upholding the commission's authority to make allowances to the small marginal wells, the majority opinion said that without such special treatment it might be unprofitable to operate them at all.

"Not only are the individual interests of those small operators involved, but their effect upon the state's economy is an appropriate factor to be taken into account when plans are devised to keep the wells open."

Justice Roberts in the minority opinion said that despite the broad discretion vested in the commission "these facts could not justify the court's abdicating its jurisdiction to test the commission order."

He quoted the District Court opinion that the orders failed to take into account numerous technical factors and in effect, raised "the worst property to the level of the best" and "lowered the best to the level of the worst."

Justice Roberts added that the opinion of the Supreme Court "announced principles with respect to the review of administrative action challenged under the due process clause directly contrary to those which have been established."

The Texas commission had asked for a stay, in the Humble case, asserting enforcement of the injunction would destroy the status quo "by permitting Humble to produce oil from its 2,547 wells without the regulations and restrictions imposed upon other operators."

In Austin, Tex., last week judgment of the three-judge federal court enjoining enforcement of the current East Texas order against Rowan & Nichols' Todd-A lease was filed. Execution, however, was stayed for 60 days. This case was tried jointly with that of Humble Oil & Refining Co. by the federal District Court last February. Formal judgment in the Humble case was later entered, though execution was likewise stayed, and the case was appealed.

Railroad Commissioner Jerry Sadler said he would recommend increased production and a return to 7-day operation for East Texas. To balance an approximate 50,000-bbl. daily increase in East Texas he would recommend that Gulf Coast fields producing crude converted into low-octane gasoline be cut about that amount.

The decision of the Supreme Court "furnishes, at least, a solid legal foundation" upon which the commission may stand in writing future orders, E. O. Thompson, commission member, said.

"When Justice Frankfurter said it is not for the courts to supplant the commission's judgment, he wrote into the opinion the very argument we used in support of our order in the trial court."

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Cities Service Leases New Headquarters in Boston

A six-story building in Kenmore Square, Boston, Mass., has been leased by Cities Service Oil Co. which will become the company's headquarters for the Boston area. The street floor of the building which will be completed on July 15 will house a superservice

station, and accessory sales quarters. The second, third, and fourth floors are being remodeled for parking for more than 150 automobiles. The company's offices will occupy the fifth and sixth floors. Towering 110 ft. above the roof line, a large neon sign featuring the company's trademark, is being installed, showing to traffic on Commonwealth Avenue, Beacon Street, Brookline Avenue, and Memorial Drive in Cambridge.

Amended Reorganization Plan for Deep Rock

Judge F. E. Kennamer, in the federal District Court at Tulsa last week, approved an amended plan of reorganization of Deep Rock Oil Corp. for submission to noteholders and preferred stockholders. Under this plan the reorganized company will issue to the present noteholders $5,500,000 of 12-year 6 per cent sinking fund debentures, date January 1, 1940. The company will also issue 400,000 shares of common stock of no par value which will be divided between the noteholders and the preferred stockholders in the proportion of 300,000 shares to noteholders and 100,000 shares to preferred stockholders. There will be no other class of stock.

Security holders who have heretofore deposited their securities with the reorganization committee will be deemed to have assented to the plan unless withdrawal of securities is made by June 22, 1940, and July 15, 1940, is fixed as the final date for acceptance of the plan by the security holders. In approving the amended plan of reorganization, the court accepted the appraisal of the assets of the company by H. N. Greis, trustee, in the sum of $16,249,788.54 after distribution by the trustee of approximately $1,200,000 to noteholders.

The Securities and Exchange Commission in reporting on the plan approved by Judge Kennamer stated that on the basis of the trustee's appraisal the plan was deemed to be fair and equitable. The plan provides for seven directors and that the initial chief executive officer of the company shall be H. N. Greis, present trustee. Mr. Greis stated that the improved condition of the company under its new capital structure and with adequate working capital will be reflected in its future business.

California Approaching Another Of Its Periodic Crises

LOS ANGELES, Calif., June 3.—California is facing another of its periodic crises and one that may possibly ultimately lead to federal control despite the universal opposition of producers and the public. Developments during the next 30 days are expected to determine the outcome of present unsettled conditions.

There is a decided difference of opinion regarding current conditions. Two different crude-oil price schedules existed for several months and during the same time the posted price of fuel oil ranged from 75 cents per barrel to 90 cents. Executives of Shell Oil Co., Inc., and Tide Water Associated Oil Co. when Standard Oil Co. cut gasoline prices last week were quoted as saying they "cannot see any good reason for this price cut." Shell Oil Co., Inc., waited 24 hours before changing its retail price of gasoline and Tide Water Associated Oil Co. waited 48 hours and then met competition on the second and third grades but kept the supergrade 1 cent above other marketers where it remains.

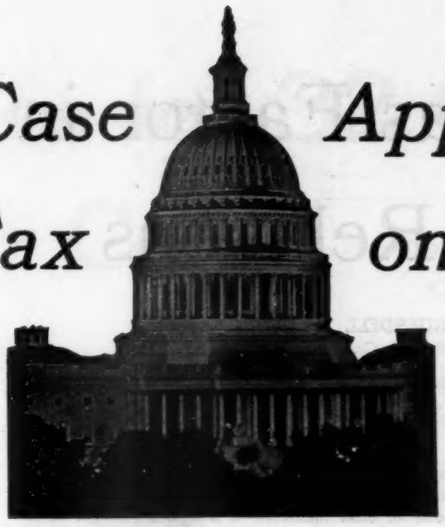
The most important problem confronting California marketers is the necessity of refraining from chiseling if they want to prevent a knockdown and drag-out gasoline price war. Union Oil Co. has served notice it will discontinue practically all crude-oil purchases after June 30 and field reports indicate Shell Oil Co., Inc., is contemplating a similar procedure. Whether these companies will actually eliminate crude purchases remains to be seen but if they do a general collapse of the curtailment program and a drastic reduction in crude-oil prices may be anticipated. The crude-oil market has already been adversely affected by the shutdown 2 weeks ago of 11 independent refiners and marketers.

The price recession in gasoline of 2½ cents, 1½ cents and 2 cents per gallon made on May 28 reduced retail prices in Los Angeles area to 18½ cents for Ethyl, 16½ cents for standard grades and 14½ cents per gallon for third grade. These prices include 3-cent state tax and 1-cent federal tax. This reduction is the first change in retail gasoline prices since March 23, 1937, and the cut in crude-oil prices posted by Standard Oil Co., February 1, 1940, was the first revision made since March 7, 1936. Drastic reductions in fuel oil made during 1939 and 1940 were directly responsible for Standard's cut in crude-oil prices on February 1, 1940, and the reduction was made on the basis of the amount of residuum contained in the various grades of crude oil. For this reason, heavy crude oil was cut the maximum, 15 cents per barrel, and the lightest grades of crude oil were only reduced on an average of about 4 cents per barrel. Now that gasoline has been cut, some expect a cut in high-gravity crude but this will be delayed because a reduction in crude prices would discourage curtailment.

Cooperative Association To Extend Pipe Line

The Cooperative Pipe Line Association is to extend its main line from its present terminus at the Burnett pool of northern Ellis County, northwestern Kansas, to the Marshall and Walters pools in the same county. The Cooperative will connect leases of Lario Oil & Gas and Carter Oil companies, and increase the crude supply for the Cooperative refinery at Phillipsburg.

Madison Case Appeal Denied; Higher Tax on Oil Due



By HENRY D. RALPH

WASHINGTON, D. C., June 3.—The petition for rehearing, filed with the U. S. Supreme Court May 29 by William J. Donovan and other counsel for the oil companies and individuals convicted in the Madison case, was denied by the court today. The petition asserted that the Supreme Court's opinion was based on three assumptions which were not contended by the Government in the trial or appeal of the case and which were not presented to the trial jury. The national-defense angle was mentioned only incidentally.

The three points on which a new trial was asked were: whether the tank-car buying program involved any agreement to adhere to prior practices in selling to jobbers and at retail; whether the jury was in fact required to find that the primary purpose of the program was to raise prices; and whether the antitrust laws prohibit any plan designed to remove a competitive evil.

On the first point the petition declared that the Supreme Court's opinion is based upon the promise that successful consummation of the conspiracy necessarily involved an agreement to adhere to prior practices in selling to jobbers and at retail. The petition declared that during the trial of the case the Government specifically disclaimed any charge of an agreement to adhere to prior practices with respect to the prices to be paid by jobbers or to be charged to retailers, and stated:

"The Government's true position, as stated at the time when they were construing the indictment in the argument on the respondents' demurrers, was that it would establish jurisdiction by proving that the market journals had published the prices which the respondents had agreed to pay under the buying programs, and that as a result of such publication the respondents' customers had been forced to pay fixed, agreed-on prices in the western district of Wisconsin. According to their own interpretation of their indictment this was the only charge of activities in the western district of Wisconsin which the respondents were called upon to disprove. Relying upon these statements of the Government's position, the respondents introduced no evidence to disprove an agreement to adhere to prior practices in selling to jobbers and at retail.

"Thus the question of whether there was an agreement to adhere to prior practices was specifically eliminated from the trial. It was raised for the first time in the appellate courts. We respectfully submit that a rehearing will demonstrate that the ends of justice demand that this court order a retrial in order that the respondents may be afforded an opportunity to submit evidence on this issue."

On the second point the petition declared that the charge did not submit to the jury the question of whether the respondents had engaged in a combination to fix prices as such a combination is defined in the Supreme Court's opinion. "The opinion seems to hold," the petition stated, "that concerted action is not to be condemned as a price-fixing combination merely because it has the incidental purpose or effect of raising prices. It must have the direct and immediate purpose or the direct and necessary effect of raising prices."

The petition pointed out that the court did not overrule a number of prior cases in which it had held that the purpose of a combination is not to be determined merely from the fact that it has an incidental effect upon prices, and argued that therefore the defendants were entitled to have a rehearing on the question of whether the jury was in fact required to find that their primary purpose was to raise prices. The petition added that this question was not argued before the Supreme Court for the reason that the Government took the position that the jury was required to find an agreement to charge an agreed-on price, a position which the Supreme Court rejected.

As to the third point, the petition stated that the Supreme Court's opinion has been widely construed as holding that any concerted effort to deal with what the court has heretofore recognized as competitive evils is illegal per se once it is shown that the natural and probable consequence of the concerted effort will be to raise prices. It was declared that the effect of such a change in the law would be far-reaching, would nullify a large number of earlier Supreme Court decisions, and would condemn most trade association activities which have previously been approved merely because they might have the effect of stabilizing prices. It declared:

"The effect of such a change is particularly important at this moment. We are confronted by the dislocations of a war program with the consequent destructive effects of scarcity on prices. Are buyers to be foreclosed from all concerted action which would protect them from runaway prices which the derangements of competition inevitably threaten? Are sellers to be foreclosed from concerted action to mitigate such situations which consideration of the public need dictates?

"In their brief and in their oral argument the respondents assumed that the cases referred to above represented the existing law, and that a plan whose direct purpose and aim is to remove a competitive evil is not condemned merely because it incidentally results in fairer or higher prices. Nor did the Government attack this doctrine; on the contrary it attempted to show that the trial court had applied it in framing its charge. If the opinion does in fact repudiate this doctrine, and if the preexisting law is to be disregarded, then we respectfully submit that this court should order a rehearing in order that the nature, wisdom and effect of such a change in the law may be fully briefed and argued."

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Increased Taxes on Oil

WASHINGTON, D. C., June 3.—Increased federal taxes are the first tangible effect on the oil industry of the new national-defense program. A bill which administration leaders are attempting to rush through Congress provides for an increase of 10 per cent in all individual and corporation income taxes and increases of from 10 per cent upward in most of the excise taxes.

The federal gasoline tax, paid by manufacturers, is increased to 1½ cents per gallon; the tax on lubricating oils is increased to 4½ cents per gallon; and the tax on transportation of oil by pipe lines is increased to 4½ per cent. These increases are to take effect July 1, 1940, and to run for 5 years. Since the gasoline and many other excise taxes were due to expire June 30, 1941, the bill provides that they are to continue until June 30, 1945. Similar increases are made in other excise taxes, including those on automobiles and tires. The following table shows the increases carried in taxes of particular interest to the oil industry, identifying the tax by the section of the internal revenue code:

Section	Description of tax	Old rate	Super-tax rate
3400 (1)	Tires	2¼c	2½c
3400 (2)	Tubes	4c	4½c
3403 (*a*)	Automobile truck chassis, etc.	2%	2½ %
3403 (*b*)	Automobiles	3%	3½ %
3403 (*c*)	Parts	2%	2½ %
3411	Electrical energy	3%	3½ %
3412	Gasoline	1c	1½c
3413	Lubricating oil	4c	4½c
3460 (*a*) (1), (2), and (3)	Transportation of oil	4%	4½ %

The total yield of all the so-called supertaxes in the bill is estimated at $656,000,000, and the bill provides that this money is to be put in a special fund to be used by the Treasury for national defense or to retire special national-defense bonds and notes. For this purpose the bill authorizes the issuance of $3,000,000,000 of special national-defense notes beyond the present debt limit of $45,000,000,000. Since this tax bill will not raise sufficient revenue to meet all anticipated national-defense expenditures during the next 5 years, there is a movement in Congress to substitute a general revision of the revenue laws which would bring in much greater revenue. The chances are, however, that the gasoline tax will be increased in any event.

The ability of the oil industry to meet all national-defense needs was stressed at a conference last week between Assistant Secretary of War Louis Johnson and other Army and Navy officials and William R. Boyd., Jr., of the American Petroleum Institute; Russell B. Brown, of the Independent Petroleum Association of America; and Fayette B. Dow, of the National Petroleum Association.

THIS concern of the military over oil transportation may be an important factor in preventing action either by Congress or by the Department of Justice aimed at divorcing pipe lines from ownership by integrated oil companies. While nothing can be said at the present time, there are definite indications that the War Department will, if it is not already doing so, vigorously oppose any changes in the oil-pipe-line system which might interfere with efficiency or disrupt transportation channels. This may not deter the Department of Justice from bringing an overall antitrust suit against major oil companies, but it may have a determining influence in restricting the suit to marketing methods rather than being aimed at complete dissolution of integrated companies.

Advertising as Factor in Good Public Relations

By PAUL TRUESDELL
Universal Oil Products Co.

PAUL TRUESDELL

SUMMARY

1. The oil industry is doing a good job for the people it employs, for the people who distribute its products, and the people who use these products; for farmers and for other industries—it is a major benefit to the nation.
2. The people do not fully appreciate this because they have never been told adequately. They are willing to listen to traducers of the industry because they think it is wealthy, big, and predatory—making too much money.
3. Institutional all-industry advertising is primarily the way to put the true story of the industry and the oil companies before the people—advertising in the oil papers to reach the people employed in the industry, advertising in general media to reach those outside the industry.
4. Such advertising will gradually change the viewpoint of editors that industry is sensational, overrich, and predatory, and will gradually change their editorial treatment of news by honestly convincing them that the oil industry is good, efficient, and, above all, human.
5. Such institutional advertising by the industry will form a background for advertising by companies to bring the public to accept and approve the industry, its achievements, and its motives as heartily as the public now accepts its products and its service.
6. Such a program should not be imposed on regular advertising departments or regular advertising budgets, but should be entrusted to agencies or individuals who possess special talent and experience—and paid for by special appropriation. Such an advertising program, executed with skill and backed by wholehearted sincerity, can go far to put the oil industry in so favorable a light that unjustified attacks will fall on deaf ears.

THE American people want the things that big business and industry can furnish them; there is no doubt about that. But they don't want business to make too much profit.

Even though the goods and services provided are improving all the time and the trend of the price curve is downward, still the popular idea is that business is making too much money, that it is paying too much to executives and stockholders—not enough to the workers and the Government. John Public thinks that business and industry ought to be made to work for less money—to his benefit—and still go on furnishing the same kind of products and services as before.

When the oil industry is mentioned, what image arises in the mind of John Public? The image of wealth; enormous power; of Wall Street; of a great octopus reaching out to every corner of the country, cutting prices here, increasing prices there—and making barrels of money. The oil industry doesn't mean to him the filling stations in his home town or on his neighborhood corner, and it doesn't mean Tom, Jake, or Billy who run them.

He knows there is nothing wrong with them—he knows them. He sees them—perhaps every day on the street, at church, at lodge meetings. He buys from them. They are all right, but they don't give John a very good picture of the industry. They have plenty of complaints to make about their suppliers, the men higher up. They growl about the company policy, about competition, about margins, and so on. They don't know much more about the industry as a whole than John does himself.

Condensed from an address before A.P.I. meeting at Fort Worth, Tex., May 27-31.

John Public suspects us because he doesn't know us. Let's make him acquainted.

The oil industry has lived up to its obligations in fullest measure; and, on that ground alone, it is entitled to the confidence and good will of the American people.

But the people accept it all as a matter of course. They take the unequaled service as much for granted as if gasoline pumps grew of themselves along the highways, like trees.

"Well, you did the job for profits, didn't you?" says John Public. "You made scads of money, didn't you?"

Well, we tried to. Sometimes we made a lot, sometimes we lost. A few got rich, a good many went broke, but most just went ahead and made a living like other people and other organizations everywhere.

Our philosophy always has been one of plenty, not of scarcity. When we overdid it, producing too much crude or too much of products, and prices slumped in consequence, who paid the penalty?

The oil men, not the people.

More and better products and better service and steadily lowering prices, that is the history of our industry.

In following this policy, we have made ever-increasing numbers of jobs for workers, paid them far above the average rate of wages in other industries, and have opened the way for tens of thousands of individuals to become merchants in their own right—to earn a living selling our products when other jobs failed.

The industry pays tens of millions to farmers in lease rentals and royalties, tens of millions to suppliers of materials and equipment. Whole industries have been stimulated and enriched—if not created—by the oil industry's insistent demand for new and better materials and instruments and equipment of various kinds which oil-industry technologists themselves have helped to invent, design, and develop.

And what we pay in taxes!

We ought to brag, not to apologize.

In spite of the willingness of John Public to listen to tales against the industry, despite his unconcern, if not glee, when attacks are made on us, I don't believe there is any real resentment in his heart. Why should there be? He knows we serve him well. He accepts and heartily approves our products. Why? Because we have told him constantly, repeatedly, and everlastingly, through every available medium, that they are good. And we have delivered.

But industrywise, he has come to believe we are a pretty bad lot, and we have not done much to contradict such impressions. Contradiction isn't very effective anyhow. It never catches up with the original story.

Advertising Is the Tool

The same advertising, merchandising methods that so effectively have sold our products just as effectively can sell the industry, its policies, its achievements, its leaders, its honesty. Institutional advertising can win friends and influence people to think well of the oil business.

If institutional advertising is really to do the job we want it to do, and it can do, it must be a united oil-industry effort, not halfheartedly supported with tongue in cheek. It might well be paid for by individual companies, but it should be sponsored by the American Petroleum Institute as an all-industry enterprise.

It should have—and to be really effective must have—the wholehearted support of, and be planned and executed under the supervision of, the industry's ablest executives—there is nothing more important. The same outstanding leaders who have built the industry now ought to devote their great abilities to selling it to the people.

I know that a subcommittee of the American Petroleum Institute is now busy exploring possibilities of an industry advertising program, and has made considerable progress.

There are three groups to whom we ought to tell our story. You can call them "employe personnel," "trade," and "public" if you like; but I wouldn't hold them at arm's length. I'd think of them as people, and talk to them as people.

First: The people who work for us; that is, everybody in the oil industry.

Second: The people who buy our products from us and sell them to the consumer at retail. If we properly sell these two groups, we can make them missionaries who will help spread our story to the third great army of people, those who buy and finally use our products.

The story should be told to each of these groups through the media that they read and believe in, and in their own language.

For the purpose of talking to the people in the industry and those who buy and sell its products, the trade papers offer an ideal medium. These have wide circulation and excellent standing. They reach the workers in every branch of the industry.

Through them company policies, company viewpoints, and company activities can be sold, in paid space, to jobbers, dealers, and others—just as products are sold now, by the right kind of advertising copy. Points of difference can be explained frankly and honestly—but no alibis, please!

And while we are about it, why not call in the trade-paper editors; make them members of our public-relations committees. Seek their counsel.

(Continued on Page 28)

Net Incomes for 32 Companies Up 4.5 Per Cent In 1939 Over Preceding Year

By F. J. SANSONE
Carl H. Pforzheimer Co.

(Comparative tables by companies will be found on Pages 96-97)

AGGREGATE net income of 32 leading oil companies for the year ended December 31, 1939, totaled $356,154,046, an increase of 4.5 per cent over the total of $341,083,662 reported by these companies in 1938. This showing for the year, despite the fact that earnings of the industry for the first 9 months of 1939 averaged approximately 35 per cent below those of the corresponding period of 1938, reflects the sharp recovery experienced in profit margins during the final quarter of last year.

Improvement, however, was not general. Seventeen of the companies reported lower earnings last year than in 1938, but their declines were more than offset by the substantial increases shown by those companies with large interests in the refining branch of the industry, operations of which were most favorably influenced by the generally improved price structure for refined products during the final months of the year. In general, companies with operations centered in production activities made the poorest showing, being adversely affected by lower average crude-oil prices than in 1938 as well as continued stringent proration in all producing states except Illinois.

Changes from the preceding year in the case of individual companies showed greater differences than usual, ranging from an increase of 185 per cent to a decline of 66 per cent. The nonuniformity of results reflected the varying degree to which the different companies were affected by the rapid changes and new developments in the industry in 1939. Production, prices and stocks of the various products changed radically during the year in their relationship to one another; some increased in price and volume while others declined and in some cases conditions were reversed within the year. Furthermore, the development of large new sources of crude-oil supply in Illinois affected operations of the various companies differently. Companies with nearby refineries were aided by the substantial savings in transportation costs effected through the utilization of Illinois oil, while producers in other areas felt the loss of markets for some of their output.

The largest percentage increases in earnings were recorded by Standard Oil Co. of Ohio, 185 per cent; Mid-Continent Petroleum Corp., 154 per cent; Sun Oil Co., 125 per cent; South Penn Oil Co., 97 per cent; Pure Oil Co., 53 per cent; and Texas Corp., 42 per cent. Richfield Oil Corp.'s net profits increased 27 per cent and those of Standard Oil Co. of Indiana and Continental Oil Co. were each 23 per cent higher than in 1938, while Gulf Oil Corp. showed an increase of 18 per cent and Standard Oil Co. of New Jersey and Atlantic Refining Co., increases of 17 per cent each. Phillips Petroleum Co., with an increase of 9 per cent, and Standard Oil Co. of Kentucky and Shell Union Oil Corp., with increases of 5 and 4 per cent, respectively, are the other members of the group which reported larger earning last year than in 1928.

Companies which reported lower earnings in 1939 and the percentage decline from the preceding year follow: Consolidated Oil Corp., 3 per cent; Plymouth Oil Co., 5 per cent; Seaboard Oil Co., 8 per cent; Skelly Oil Co., 11 per cent; Socony-Vacuum Oil Co., Tide Water Associated Oil Co. and Texas Pacific Coal & Oil Co., 14 per cent each; Union Oil Co. of California, 15 per cent; Humble Oil & Refining Co., 16 per cent; Houston Oil Co., 23 per cent; Amerada Corp., 25 per cent; Lion Oil Refining Co., 28 per cent; Pacific Western Oil Corp., 33 per cent; Standard Oil Co. of California, 38 per cent; Barnsdall Oil Co., 39 per cent; and Ohio Oil Co., 66 per cent. Empire Gas & Fuel Co., which reported a net loss in 1939 compared with a profit in 1938, was the only member of the group to report a deficit last year.

Of the total 1939 net earnings of the 32 companies, 49 per cent was earned by the four leading Standard Oil companies—California, Indiana, New Jersey, and Socony-Vacuum. In 1938 they accounted for 51

(Continued on Page 96)

EARNINGS AND DIVIDENDS OF 32 OIL COMPANIES 1928-39

Year—	Net income	Cash dividends	Net income distributed (per cent)
1939	$356,154,046	$210,193,197	59
1938	341,083,662	220,897,663	65
1937	629,144,287	311,935,027	49
1936	458,820,512	251,625,745	55
1935	287,719,407	132,979,607	46
1934	182,341,148	142,716,146	78
1933	102,967,964	112,295,367	109
1932	82,144,076	168,413,161	205
1931	*73,445,526	239,083,852	
1930	335,979,216	325,696,644	92
1929	638,158,233	325,221,476	51
1928	551,971,354	261,644,292	47
Total	$3,893,038,279	$2,702,702,177	69

*Deficit.

Note: Figures for 1939 and 1938 represent the totals of the 32 companies shown in the accompanying tabulation, while figures for prior years also included Standard Oil of Nebraska and Standard Oil of Kansas, but did not include Richfield Oil Corp.

COMPOSITE INCOME ACCOUNT AND BALANCE SHEET OF 32 MAJOR OIL COMPANIES

INCOME ACCOUNT	1939	1938
Gross operating income	$4,467,835,619	$4,734,334,319
Depreciation, depletion, etc.	548,881,303	549,586,516
Net income	356,154,046	341,083,662
Cash dividends paid	210,193,197	220,897,663

ASSETS	1939	1938
Properties, plant and equipment	$10,901,036,678	$10,854,271,659
Reserves for depreciation, depletion, etc.	5,446,785,521	5,385,929,957
Net fixed assets	$5,454,251,157	$5,468,341,702
Investments and advances	$924,186,425	$741,019,714
Miscellaneous assets	186,669,849	189,582,304
Current assets:		
Cash and marketable securities	898,072,887	827,260,527
Inventories, crude and refined oil	861,752,112	968,994,642
Other current assets	594,470,811	628,737,742
Total current assets	$2,354,295,810	$2,424,992,911
Total assets	$8,919,403,241	$8,823,936,631

LIABILITIES	1939	1938
Common stock	$3,732,250,168	$3,715,326,749
Preferred stock	299,540,937	300,657,137
Funded and long-term debt	1,043,554,100	999,619,330
Capital surplus	885,853,355	907,327,060
Earned surplus	1,593,116,083	1,483,512,465
Miscellaneous liabilities	811,816,732	822,667,015
Current liabilities	$553,271,866	$594,826,875
Total liabilities	$8,919,403,241	$8,823,936,631

Pipe-Line Activity

Western Natural Gas Plans To Build 770-Mile Line

WASHINGTON, D. C.—Western Natural Gas Co. has proposed to construct a 770-mile natural-gas pipe line estimated to cost about $30,000,000 according to an application filed with the Federal Power Commission.

The company plans to construct, acquire, and operate facilities for the transportation and sale of natural gas from the Hugoton field in southwestern Kansas, a distance of 770 miles direct to Milwaukee, Wis., running through Iowa and perhaps with laterals into Nebraska or Missouri or both.

The company, headed by Paul Kayser, of New York, proposes to sell natural gas only to industrial consumers and to public-utility companies for resale and will not operate any facilities for the public distribution and sale of natural gas at retail, the application says.

The company proposes initially to enter into contracts with distributing companies serving Milwaukee, Madison, Beloit, Janesville, Racine, Kenosha, and Port Washington, Wis., the city of Dubuque, Iowa, and the territory adjacent to these cities. These areas are not now served with natural gas by any other natural gas company.

The initial working capital of Western Natural Gas Co. will be $1,000,000. If the commission grants the company's application to construct these facilities, it will increase its authorized capital stock to 810,000 shares, of which 10,000 will be represented by 5 per cent cumulative convertible preferred stock, $100 par value a share, and 800,000 shares of common stock, $5 par value a share. In addition the applicant will sell an $18,500,000 issue of first mortgage 4½ per cent bonds, and a $7,500,000 issue of 10-year unsecured debentures.

C. S. Foreman Co. Awarded Northern Natural Contract

C. S. Foreman Co. was awarded contract by Northern Natural Gas Co., Omaha, Neb., for the construction of 66 miles of 24-in. gas transmission line in four loops between Mullinville, Kans., and Beatrice, Neb., and 9 miles of 12-in. line near Palmyra, Neb. These extensions are loops on the Northern Natural Gas Co.'s main line extending to Omaha and Minneapolis. The 24-in. and 12-in. lines are to be solid welded and C. S. Foreman Co. will do its own electric welding. C.S. Foreman Co. was also awarded contracts for construction of additions to the gas-compressor stations of the Northern Natural Gas Co. at Bushton, Kans., and at Beatrice, Neb. Work on the pipe line and stations will start immediately. The additions to the gas-compressor stations will add 1,300 hp. to each of these stations.

Contracts Will Be Let for 135 Miles in Pennsylvania

Manufacturers Light & Heat Co. has received bids for construction of two lines. One will extend from Olean, N. Y., to Brookville, Pa., and will consist of 117 miles of 8-in. Between Monaco and Ellwood City, Pa., an 8-mile line is to be laid.

Montana-Dakota Utilities Plans 110-Mile Pipe-Line Project

Montana-Dakota Utilities Co., Minneapolis, Minn., has asked for bids for construction of 110 miles of 8-in. pipe line for transmission of natural gas from the Bowdoin dome gas field in Valley and Phillips counties, Montana, to a point near Glendive, Mont., by way of Fort Peck. Connection will be made at Glendive with the main pipe-line system of the company extending into parts of Minnesota and North Dakota, where gas is furnished to various municipalities. Included in the project is distribution piping of about 5 miles for several towns, in 3-in. and 4-in. sizes. Pipe will be manufactured by Youngstown Sheet & Tube Co., and will be electric welded, with 7/32-in. wall thickness; 4,700 Dresser couplings will be used as joints.

Two Major Pipe-Line Projects Considered by Argentina

NEW YORK, June 3.—Two major pipe-line projects are under consideration by the Argentina Government through Yacimientos Petroliferos Fiscales, the national oil company. If the investigation of problems involved under way in this country justifies the program construction probably will be launched in 1941.

One of the projects under consideration is the construction of a 550-mile, 12-in. crude line from the Lulunta and Tupungato fields in the Province of Mendoza in the western part of the country. It was not until the latter part of 1939 that the Tupungato field was proved a major reserve although previous drilling had definitely established commercial production. The Tupungato field produces from a section approximately 750 ft. thick between 5,900 and 6,650 ft. The Lulunta field, 32 km. northeast of Tupungato, produces from a zone around 7,300 ft.

Tupungato crude is 31° A.P.I. gravity and has a high paraffin content involving special pumping problems for pipe-line movement. The 550-mile line would terminate on the Rio Parana, leading to the Atlantic Coast. A delegation of engineers representing the Y.P.F. headed by Julio Canessa is now in the Mid-Continent studying problems involved in the pipe-line project.

Survey for 50-Mile Line By Illinois Pipe Line

Illinois Pipe Line Co. of Findlay, Ohio, is making a preliminary survey for construction of an 8-in. crude gathering line about 50 miles long, from near Centerville to Bridgeport, Ill. Three 55,000-bbl. tanks will be erected on the J. F. Barber farm, about a mile south of Centerville. The line will serve many southern Illinois fields, probably including the Lancaster and Albion areas as well as others. It will have a daily capacity of about 35,000 bbl.

Construction Started on 97-Mile Pipe Line From Wasson Field

FORT WORTH, Tex.—Clearing of right-of-way for Basin Pipe Line Co.'s 97-mile line from the Wasson field to Big Spring, Tex., has been started and laying of pipe is expected to be started this week end or the first of next week. Completion of the 6-in. line, contract for which has been let to O. C. Whitaker Co. of Fort Worth, is scheduled for mid-July. The line will provide a fourth outlet for the field, now the largest in West Texas. Work is now being done on the portion of the line to be laid from Wasson to Seagraves, and will be carried on from the latter point until construction reaches a point midway between Seagraves and Lamesa. The contractor will also lay 11 miles of 4-in. gathering system in the field.

The line will terminate at Cosden Petroleum Corp.'s Big Spring refinery. The company has contracted with five independent Wasson producers to purchase 5,000 bbl. of crude daily for the next 5 years, paying the posted field price plus a transportation charge. Cosden, during the past 18 months, has had difficulty in obtaining sufficient crude from nearby fields in Howard and Glasscock counties to keep its 15,000-bbl. plant running at full capacity.

Trio of pipe-line stringing contractors, snapped while fraternizing together. They are J. C. Dowding, Flint, Mich.; C. Hobson, Dallas, and Roy F. Parkhill, Tulsa

Buffalo-Syracuse Line For Socony-Vacuum

Socony-Vacuum Oil Co., Inc.'s decision to lay a $700,000 gasoline pipe line between Buffalo and Syracuse, N. Y., was caused largely because the company's barges, when loaded to capacity, cannot traverse that end of the state barge canal.

Canadian Oil Expansion Includes Crude Line

PETROLIA, Ont.—Progress is being made with the construction of a new crude-oil pipe line from Froomfield on the St. Clair River to the Canadian Oil Companies refinery here. The refinery, following recent expansions, is introducing a number of new lines, including a new motor oil, insect and livestock sprays, and liquid and linseed oil soaps.

Refinery News

Nebraska Refiners Watch Oil Production in Falls City

OMAHA, Neb.—Refiners operating plants in the State of Nebraska, particularly those within truck distance of the new Falls City field, are trying to evaluate the future possibilities of the new field and are making plans for increasing the crude capacities of their equipment. In this city the Searle Petroleum Co. is handling up to 350 bbl. of crude from the new well daily and is processing up to 150 bbl. of additional oil brought from more distant points. Plans call for increasing the capacity of the local refinery to double its present size if the new Falls City crude production is expanded.

Stoddard Solvent Revisions To Be Effective June 20

WASHINGTON, D. C.—Minor revisions in the test procedure for inspecting Stoddard solvent have been under consideration by refineries as a problem of the U. S. Department of Commerce. Due to the general acceptance of these revisions, the Division of Trade Standards of the National Bureau of Standards, under F. W. Reynolds, is issuing the third edition of specifications and these will be in force on all material from June 20, 1940. Printed copies of the revised commercial specifications are available at the National Bureau of Standards, Washington, D. C.

Magnolia to Quadruple Size Of Fort Worth Refinery

FORT WORTH, Tex.—Plans for the enlargement of Magnolia Petroleum Co.'s Fort Worth refinery from 5,000 to 20,000 bbl. daily were announced here Monday. A new combination unit will be added, along with a naphtha-reforming unit and polymerization plant. Existing topping and cracking equipment will be modernized, and crude-storage capacity increased. Construction work is expected to be started in the immediate future with completion scheduled possibly by the end of this year.

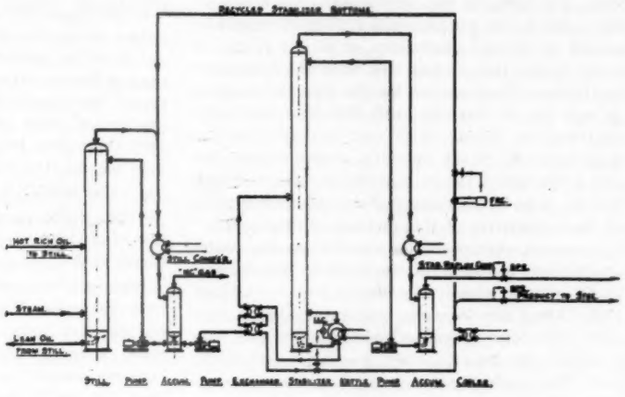
Natural Gasoline

Recycle Stabilizer Bottoms To Increase Gasoline Yield

Recycling the bottoms from the stabilizer during the manufacture of natural gasoline is being advocated as an economical means of increasing the recovery of the product and adds flexibility to the operation. This factor may compensate for any limitation in the range over which the temperature or pressure inside the tower may be altered.

In most plants the temperature of the cooling water determines the temperature limitation and the pressure used during operation of the plant is usually fixed by design or well pressure. Assuming the pressure and temperature of the equilibrium conditions cannot be varied economically, the only other method of securing a greater percentage of condensation or recovery is to change the composition of the phases in equilibrium. In hydrocarbon mixtures the extent of condensation is proportional to the ratio of heavy to light constituents in equilibrium. By introducing a stream of heavy fractions, this ratio can be changed and greater condensation will result. The source of this heavier material should be as nearly as possible independent of all plant operation conditions or of change in feed materials. The only such source of supply is the finished product from the stabilizer. The actual quantity to be recycled depends upon plant design and operating conditions, composition of plant feed and the desired final product.

In nearly all gasoline plants it is desirable to keep the recycled vapor load as low as possible. Any constituents which are desired in the final product and which are not condensed in the still condenser to be recovered must be reabsorbed in a reabsorber or condensed by the use of a recompressor. By the addition of stabilizer bottoms to the still condenser the recycle vapor load from the condenser can be partially or totally eliminated as desired. Then, if a reabsorber or a recompression cycle is necessary to recover desired constituents from vapors which have been vented from other portions of the plant, its efficiency of operation will be greatly increased.



The recycled stabilizer bottoms may be added directly into the still condenser as liquid or may be used as reflux. From an equilibrium standpoint it makes no difference in the final result whether the recycled stabilizer bottoms enter the condenser as a vapor or as a liquid.

Large quantities of stabilizer bottoms may be recycled to the still condenser with very little effect upon the stabilizer itself. The recycled stock is returned to the stabilizer along with the condensed vapor fraction from the still condenser. As it is desired to recover all of the recycled stabilizer bottoms, this portion of the stabilizer feed is not vaporized in the stabilizer but merely passes through in the liquid state.

The recycling of stabilizer bottoms in no way effects the operation of the main absorption unit other than to decrease the quantity of recycled vapors. The recycling of stabilizer bottoms is by far the most economical and efficient method of obtaining the desired recovery of saleable fractions.

Recycling stabilizer bottoms is being introduced in the California fields but is applicable in all natural-gasoline plant operations where stabilization of the finished products is conducted. The process is operated under patent to the Fluor Corp., Ltd.

California Natural-Gasoline Plant Operations in April

California natural-gasoline plant operations in April were as follows:

San Joaquin Valley—	Gas treated (thou. cu. ft.)	Natural gasoline produced (gal.)
Beiridge	3,690,055	1,985,481
Elk Hills	97,941	134,477
Kettleman Hills	7,146,312	10,122,423
Midway-Sunset	900,004	1,823,906
Mountain View	278,677	334,816
Miscellaneous	1,339,056	696,513
Coastal district—		
Elwood	337,544	459,469
Rincon	149,700	205,016
Santa Maria	152,150	445,382
Ventura Avenue	3,137,206	4,550,229
Miscellaneous	486,843	476,946
Los Angeles Basin—		
Brea-Olinda-Coyote	473,780	1,387,857
Dominguez	1,364,608	2,187,965
El Segundo	34,719	94,572
Huntington Beach	768,346	2,694,600
Inglewood	258,806	323,708
Long Beach	2,350,701	7,347,446
Montebello	2,593,203	1,679,610
Richfield	285,719	606,833
Rosecrans	1,026,665	1,202,832
Santa Fe Springs	1,338,775	4,594,563
Seal Beach	334,543	586,635
Torrance	276,869	859,118
Miscellaneous	1,161,898	2,204,407
Total (all fields)	29,984,120	47,004,804

DISTRIBUTION

	(Gal.)	(Gal.)
Stocks beginning of month	3,032,704	
Production during month	47,004,804	
Delivered to refineries		46,343,152
Delivered to jobbers, brokers, or blenders		747,129
Blended at plants for production of motor fuel		806
Losses		78,459
Stocks end of month		2,867,962
Total	50,037,508	50,037,508
	(Gal.)	(Bbl.)
Liquefied petroleum gas production	3,928,857	93,544
Motor-fuel production	4,005	95

Natural Gas

Lone Star Gas Company Pays Chain-Store Tax

AUSTIN, Tex.—The Lone Star Gas Corp. has formally accepted the findings of Texas higher courts making it liable for the chain-store tax based on the ownership of its subsidiaries and caused the dismissal in the Third Court of Civil Appeals of the appeal from an adverse judgment in Williamson County.

Immediately previous to moving for dismissal, the company and its subsidiaries paid all chain-store taxes claimed from 1936 through 1939 and attached the comptroller's receipt as an exhibit. The amounts thus paid were as follows: Community Natural Gas Co., $8,986; Texas Cities, $4,112; Lone Star, $1,103; Dallas Gas Co., $1,543; and County Gas Co., $886, a total of $16,628.

Lone Star had won a judgment in venue in the Williamson County case, that it be sued in Dallas, the county of its domicile, but its dismissal motion said the case had become moot by virtue of the judgment by the state in the Third Court of Appeals in its case against the H. E. Butts Grocery Co. A writ of error was refused by the Supreme Court and thus the judgment became final, holding the grocery company liable for the chain-store tax for its subsidiaries. The same principle of taxation was involved in the Lone Star case, the motion asserted, and the final state court judgments now are binding on the gas company. Previously each of the subsidiaries had paid a chain-store tax on its own stores, but the courts held a common ownership exists in Lone Star, the holding company. The stores sell appliances to increase the use of gas for cooking, refrigerating, and heating.

Houston Natural Gas Corp. Acquires Four Subsidiaries

WASHINGTON, D. C.—The Securities and Exchange Commission has approved an application by Houston Natural Gas Corp. to acquire the utility assets of four subsidiary companies and for a declaration that it has ceased to be a holding company.

In its application, the corporation asked approval of the acquisition of the utility assets of the Houston Natural Gas Co., Texas Natural Gas Utilities, Gulf Cities Natural Gas Co., and Tex-Mex Natural Gas Co., four subsidiary companies.

The commission gave its approval to this and to the request that the corporation be declared no longer a holding company, providing the program as outlined is completed.

Gas Line for Arlington Field

Oklahoma Utilities, Inc., shortly will begin construction on a 16-mile gas line from Arlington field, 10 miles south of Stroud, to tie in with its system in the Bigpond area in Creek County. Mike Foreman has contract for building the line. Shell Oil Co., Inc., and Allied Materials Corp. will furnish natural gas.

Canadian Gas Production

OTTAWA, Canada.—Natural-gas production marketed from all Canadian fields in February increased to 4,290,250,000 cu. ft. from the February 1939 output of 4,114,943,000 cu. ft.

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Sohio Corp. Reported Planning Additional Illinois Line

MOUNT CARMEL, Ill.—Sohio Corp. (Standard Oil Co. of Ohio) is obtaining right-of-way for a crude-oil pipe line to supplement the overloaded Wayne County-Clay City pipe line. A line is planned from Barnhill, Felix, and Walker pools in southern Wayne County, across southern Edwards County, and into Wabash County at Cowling. There it is to tie up with a trunk line leading to Mount Vernon, Ind., whence crude will be shipped by barge.

Another line is to originate at the Morrison and Norah pool, 2 miles south of Albion, to meet the proposed new line in Edwards County. Crude oil from southern Wayne County pools has been carried by pipe line to Clay City, but traffic over that route reportedly has become too heavy.

American Petroleum Export Co. Opens New Offices

Glenn A. Smith, Los Angeles, Calif., president of American Petroleum Export Co., Houston, Tex., announces that the company has opened new offices in Los Angeles, and will resume active shipments of its products for export on its own account as well as for the account of a large British and French firm it represents as purchasing agent. Mr. Smith and associates believe there will be an increasing export business in the Far East caused by a reallocation of the sources of supply brought about by the war.

Advertising as Factor in Good Public Relations

(Continued from Page 24)

They are the trusted advisers of the various groups in the industry—they know how to talk to them. They can help materially.

The first step is to set the petroleum-trade house in order. Correct the conditions, if they are any, that furnish the borer from within a handy soapbox from which to delude and mislead self-pitying audiences in the trade itself.

How about the millions of motorists? That is easy. They read the newspapers and magazines, scan the billboards, and listen to the radio. These are our media of appeal to them—especially the newspapers.

And what shall we tell John Public in our advertising copy?

For heaven's sake, don't try to tell John Public that we're perfect. He knows better and so do we. He doesn't expect us to be perfect — any more than he is. Instead, let's tell him and show him that we're human.

News Handling

And this brings us to the most important thing of all that a consistent institutional advertising program would accomplish.

It would bring about a gradual change in the handling of news about the industry—a change which would put us in a more favorable light before the public. And it would bring us a good deal of valuable publicity that no amount of money could buy.

But don't imagine that such an all-industry advertising program, good as it might be, is all that could be done or ought to be done along this line. It would furnish a solid and effective background for institutional advertising by individual oil companies in the appropriate publications in their own marketing territories. I know that some companies are doing such advertising now.

I seem to hear someone objecting: "Our advertising and sales departments wouldn't approve such a program. They want all of the appropriation to spend to increase sales."

I believe that's true, and I don't blame them. Their province is to sell goods, and their success or failure is measured by that standard. You can't expect them to be sympathetic to an expenditure of money that brings no direct sales (although it would in the long run).

No, such a program should be entirely apart from product advertising.

Stabilization Through Proper Well Spacing

(Continued from Page 17)

up here to beat the drum for proration law in Illinois, although it is my personal conviction that one is needed. My only hope is that the Illinois Legislature will determine the will of the majority as best it can and act accordingly. I will say that a good conscientious regulatory body can be a tremendous help to the industry whether it be in Illinois, Indiana, Oklahoma, or any other state. I am anxious to excite at least a spark of curiosity concerning this matter of spacing and hope you will consider it seriously as an economic problem vital to all producers.

I am not pessimistic about the future of our business. Neither can I be optimistic. I hope and believe that the industry in general is becoming more and more cognizant of the situation which it must ultimately meet and solve—this problem of limiting our capital investment per unit of current income and per unit of ultimate income.

Before closing I would like to make a few remarks about one other phase of our business in which there is additional net income available through the reduction of operating cost and additional ultimate income through the recovery of a greater quantity of oil.

Unitization was first proposed in 1893 by Henry L. Doherty, so you see, it is far from being a new idea. Mr. Doherty was somewhat of a crank on this subject and his idea was that laws should be passed to compel unitization of all oil fields. It is my belief that it was this idea of compulsory unitization which earned for the plan its enemies. At any rate it was not until 1930 that the A.P.I. approved it. Today it is well accepted by the large majority of the industry although there are still a few who will not consider it. Many unitization projects have established overwhelming proof of the superiority of this method of operation.

A current example of the results possible under unitization, is found in the Billings-Wilcox pool in Oklahoma which was discovered in August 1935. After development was substantially complete, the four operators owning all but a few extreme edge leases formed a unit to operate the pool. This made it possible to utilize careful reservoir control and to take advantage of a pronounced and efficient water drive. The sand has zones of varying permeability and in order to prevent uneven water encroachment, and to extend the flowing life of the wells, the rate of withdrawal was voluntarily reduced and pressure maintenance was instituted. Over 4½ million barrels of crude have been produced in the past 2 years and the bottom-hole pressure has decreased but 4 lb. The lifting cost has been only 3.1 cents per barrel.

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THE MARKETS*

CRUDE OIL: The outstanding feature of last week's crude-oil production was the increase in the output of the Salem and Centralia fields in Illinois. Total United States crude output was 3,747,671 bbl. per day, a decline of 89,758 bbl. per day from the average of the previous week. Texas production fell off 99,190 bbl. per day but Illinois showed an increase of 16,698 bbl.

REFINERY: Two factors are exerting a favorable influence on gasoline movement without having any effect of consequence on tank-car prices. One is the seasonal rise in consumption. The other is the expectation of a half-cent increase in the federal tax July 1. This latter will impel jobbers to fill their storage while the 1-cent tax is still in force. Uncertainties of export movement are creating an erratic market in lubricating oils and wax. Congestion of both refinery and natural gasoline at the Gulf Coast remains unrelieved.

TANK-WAGON AND POSTED-DEALER: Standard of Nebraska reduced normal gasoline prices throughout the state. All prices ½ cent or less below the new normal were advanced to normal. Standard of California reduced tank-truck and retail gasoline prices 1½ cents in California, Oregon, Washington, Nevada, and Arizona. Socony-Vacuum reduced tank-wagon gasoline prices in Buffalo, Rochester, Syracuse, and Utica. Standard of Indiana and Standard of Louisiana made local adjustments.

FINANCIAL: Oil shares moved in a narrow range in a depressed market that saw Standard of New Jersey touch the lowest point in 7 years. A few issues, including Phillips, Pure, and Mid-Continent, displayed firmness. Average of 30 representative stocks for week ended June 1: High, 20.76; low, 19.22; close, 19.95. Week ended May 25: High, 22.35; low, 19.04; close, 19.99.

*Detailed information in market section.

Saturation Point Not in Sight, Illinois Operators Told

(Continued from Page 15)

Mr. Hawthorne said that six wells have been drilled and logged with the equipment throughout the Mid-Continent and Gulf Coast areas, and that experience leaves little doubt as to the accuracy of the new method of securing electric logs.

H. G. Chase, tax agent of Pure Oil Co., Chicago, talked on taxation in Illinois and Indiana, pointing out that the present assessment method for producing leases is based on that in use in the old fields. In Illinois $100 per bbl. for first year of production, $200 for second, $300 for third and $400 thereafter is used as assessed value, taking into account the flush production, and increasing the value until the wells are on a settled basis.

"This would be somewhat high if enacted into law, but has worked fairly well so far," Mr. Chase said.

Indiana is using a system of 365 times daily average production times price per barrel of oil on March 1, using 25 per cent of the figure arrived at for the first year of production, 50 per cent the second, 75 per cent the third, and 100 per cent the fourth year and thereafter, he said.

Increased production for the old Trenton rock oil and gas field of northeastern Indiana was predicted by Prof. Ralph E. Esarey, Indiana state geologist, as the result of several factors, one being the discovery of 27 ft. of saturation in the No. 1 Alto Johnson in Randolph County and knowledge that production in the Trenton varies from 20 ft. in to 410 ft. in, while the old wells stopped at 40 to 90 ft. in. Professor Esarey said improved methods of acidizing may increase recovery very substantially.

H. H. Anderson, vice president, Shell Oil Co., Inc., of St. Louis, presented the motion picture "Oil From the Earth" and talked of the benefits to the people of the state where new production is found.

Orville Dowzer, of Dowzer Construction Co., Salem, Ill., discussed electrical-pumping methods, recommending use of the facilities of regular utilities and purchase of current rather than installation of generating equipment on grounds of economy. He said considerable savings were possible through use of modern automatic-control equipment in saving of labor and of down time after an interruption of current.

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Peru Buys Tanker

NEW YORK, June 4.—The U. S. Maritime Commission has approved sale by Tide Water Associated Oil Co. of its tanker, Coalinga, to Cia. Peruana de Vapores Y.D.S., Callao, Peru, with transfer to Peruvian registry.

DEATHS

V. D. MOODY, 63, president of Moody Engineering Co., New York, died May 30. He was a consulting engineer for Asiatic Petroleum Corp., Shell Oil Co., Inc., and several other firms on electrical and pipe-line problems.

HARRY J. WITZ, 48, vice president of Envoy Petroleum Co., Long Beach, Calif., was fatally stricken while playing golf. He was manager of the Witz-Goodwin refinery.

International

England . .

Prospecting Licenses Have Been Renewed

THE secretary for mines announces the renewal for a further term of 12 months for 30 prospecting licenses granted to D'Arcy Exploration Co., Ltd. The areas concerned consist of:

One licensed area in the County of York, covering about 178 sq. miles and including the town of Whitby,

Twenty-four contiguous licensed areas covering about 4,470 sq. miles in the counties of York, Lincoln, Nottingham, Leicester, Rutland, Cambridge, and Norfolk, the four corners of which are in the neighborhood of the towns of Filey, Thirsk, Oakham, and Wisbech,

One licensed area in the counties of Dorset and Wiltshire covering about 177 sq. miles and including the town of Blandford,

One licensed area in the County of Dorset, originally covering about 188 sq. miles, but later extended to 200 sq. miles, and including the towns of Dorchester and Wareham,

One licensed area in the counties of Dorset, Wiltshire, and Southampton, covering about 177 sq. miles and including the village of Downton,

One licensed area covering about 150 sq. miles in the County of Southampton, namely the Isle of Wight, and

One licensed area in the counties of Midlothian and East Lothian covering about 71 sq. miles and including the town of Dalkeith.

A further term of 12 months of two prospecting licenses has been granted to the D'Arcy Exploration Co., Ltd., consisting of about 189 sq. miles in the counties of Derby and Stafford, and 164 sq. miles in the counties of Chester, Derby and Stafford.

Three prospecting licenses have been issued to the D'Arcy Exploration Co., Ltd. The licenses concerned consist of (1) An area of about 179 sq. miles in the counties of Lancaster, Chester and Flint, including part of the River Mersey; (2) an adjoining area of about 156 sq. miles in the counties of Chester, Flint and Denbigh including the estuary of the River Dee; and (3) an area of about 197 sq. miles in the counties of Leicester, Nottingham and Rutland, including part of the town of Melton Mowbray.

The secretary for mines announces that the prospecting license granted to the N.M.D. Syndicate, Ltd., has been terminated. The license covered an area of about 5 sq. miles situated near Three Bridges in the County of Sussex.

Further prospecting license has been issued to Anglo-American Oil Co., Ltd., consisting of an area in two separate portions, covering about 127 sq. miles, one in Yorkshire, including the town of Stokesley, and the other in the bed of the sea off the coast of Yorkshire, including Robin Hood's Bay.

A further term of 12 months from April 22, 1940, of a license has been granted to the Gulf Exploration Co. (Great Britain), Ltd. The licensed area originally consisted of about 153 sq. miles in the county of York, including the Cleveland Hills, but was later extended to cover a total of about 171 sq. miles in the county of York, including the villages of Carlton and Lastingham.

The secretary of the British Mines Department announced in the House of Commons that he regarded the effective utilization of home-produced substitutes for imported fuels as a matter of great importance, calling for mobilization of the best possible technical and business experience and he accordingly appointed a number of committees to report on ways and means of securing the most effective use of such home-produced fuels during the war. The gas works and coke ovens as a source of benzol, creosote, and pitch, make a particularly important contribution to home-produced supplies of liquid fuel, quite apart from their great value as a source of such vital materials as toluene and the derivatives of coal tar. One committee set up was asked to report on the possibility of increasing the amount of liquid products obtained by high-temperature carbonization in gas works and coke ovens and the most advantageous means of utilizing such products in war time.

In view of the special importance of benzol, as a fuel and as a source of toluene, the committee was asked to give immediate consideration to the possibility of increasing the amount of benzol recovered.

The committee's report shows a great deal has been done to increase the quantity of benzol recovered, for it is estimated that 15 million more gallons of crude benzol will be recovered in 1940 compared with 1938. But the committee has found that a further quantity of crude benzol, amounting to some 12 million gallons in a normal year, could reasonably be recovered at gas works and coke ovens, by the following means: Installation of recovery plants at certain gas works which do not at present recover benzol; increasing the efficiency of existing recovery plants at gas works erally.

The secretary for mines announces that Sir Alfred Faulkner, C.B., C.B.E., has been seconded for special duties in connection with the war supplies of petroleum products, and that Sir Alfred Hurst, K.B.E., C.B., has been appointed under-sec retary for mines in his place.

War . .

Socony-Vacuum Head Speaks of Its Effects

IN calculating the earnings of Socony-Vacuum Oil Co., Inc., for the first 4 months of this year at $19,500,000 before a stockholders' meeting in New York last week, John A. Brown, president, gave an insight to the difficult conditions of foreign operations. "From your reading of the annual report for the year 1939 and from the recent news," said Mr. Brown, "you will realize that the difficulties of stating the income from abroad have increased rather than diminished. Some of our income comes to us in the form of dividends which may not be actually declared until the latter part of the year, but when we make estimates for a few months at a time, we can only assume that we will receive in dividends approximately our share of the earnings, although later events in the year might change this expectation. We have not been including in our estimates since the war started any possible earnings in Germany, France or England, nor lately from Norway, Denmark, Holland or Belgium. We do not know whether any of our European properties have suffered any substantial damage to date, and we can not tell what provisions might have to be made by the close of the year for losses or damages or for any other causes affecting our foreign assets.

"I am sure that with the war going on, you will not expect us to make any predictions about what our earnings may be during the remainder of the year. We are having increased sales at home, although price levels are not satisfactory. We continue business abroad to the extent possible with existing conditions. We know no more than any others how long the present conflict may last, nor what consequences it may bring for the future. We hope, however, that international trade will continue in a post-war world without too severe restrictions and that we shall be able to go on with our business abroad."

Rumania . .

Production in March Was Off 3 Per Cent

RUMANIAN crude-oil production increased in March to 520,635 metric tons, but the daily average of 16,795 tons was off slightly from that registered in February of 16,845 tons.

For the first 3 months of the year Rumanian crude-oil production totaled 1,524,502 tons against 1,571,648 tons for the same period in 1939, a loss of 47,146 tons, or 3 per cent.

At the end of March Rumania had 337,112 tons of oil in storage and 171,862 tons in pipe-line pumping stations and in transit, or a total available surplus of 508,974 tons, according to the Moniteur du Petrole Roumain's May issue.

The report of February and March, 1940, production by fields and districts follows:

(Figures in metric tons)*

District of Prahova:	February	March
Tintea	106,143	111,697
Lilieati	5,642	6,322
Baicoi	5,731	5,977
Margineni	9,679	10,495
Moreni	49,903	53,602
Piscuri	26,766	29,858
Ceptura	48,035	54,706
Boldesti	51,455	53,632
Aricesti	1,667	1,964
Runcu	7,098	7,359
Chiciura-Bustenari-Bordeni	8,625	9,076
Campina	2,245	2,355
Pitigaia-Gura	1,008	975
Copaceni	1,159	1,091
Scaiosi	83	88
Total Prahova	325,239	349,197
District of Dambovita:		
Gura-Ocnitei	92,804	97,224
Bucsani	21,368	21,819
Ochiuri	20,225	21,561
Rasvad	17,861	18,862
Teis-Aninoasa	3,145	3,496
Viforata	1,219	1,349
Glodeni	103	149
Total Dambovita	156,725	164,460
District of Buzau	3,037	3,268
District of Bacau	3,506	3,710
Grand total	488,507	520,635

*The average conversion factor for Rumanian crude oil is 7.336 U. S. bbl. of 42 gal. per metric ton.

Service on Active Fields

VILLE PLATTE FIELD, EVANGELINE PARISH, LOUISIANA

Compiled by The Oil and Gas Journal

Name of field
Ville Platte.

Geographic location
The field is situated about 7 miles north of the town of Ville Platte in northeastern Evangeline Parish, Louisiana, centering in Township 3s-2e.

Principal towns and cities
The town of Ville Platte has a population of approximately 2,500, while Eunice and Opelousas, approximately 24 miles southwest and southeast of the field have populations between 5,000 and 10,000.

Highways and roads
The field is located off U. S. Highway 190. Turn north at Eunice or Opelousas on state Highways 26 or 5. Both roads to Ville Platte paved, while main road to field is graveled.

Railroads serving area
Texas-Pacific Railroad passes through town of Ville Platte with convenient sidings and loading points.

Availability of supply houses
The field is served readily by trucks from supply stores at Ville Platte, Eunice, Jennings, and Lafayette.

Type of country
The country is flat, semiwooded, most of which is under cultivation.

Trucking companies
Several hauling and teaming contractors have established offices at Ville Platte and Eunice.

Hotel and accommodations
The towns of Eunice and Opelousas offer good hotel accommodations, both within short driving distance of the field.

Schools and churches
Excellent churches and schools readily accessible at Ville Platte, Eunice, and Opelousas.

Electric power and gas companies
Continental Oil Co. operates its own gas system, while electric power is available at main power line at Ville Patte.

DEVELOPMENT

The structure was found with reflection-seismograph shooting by Continental Oil Co. in 1935. The company's first test, No. 1 Folonie Tate, in Section 44-3s-2e, was completed in September 1937 for an initial production of 265 bbl. of 52.4-gravity oil per day, flowing through various chokes with tubing pressure 2,150 lb. and casing pressure 2,350 lb. The well was drilled to a total depth of 9,098 ft., and was completed through perforated casing at 9,007-35 ft. The sand section was identified as the Sparta sand, with the top of the saturated section logged at 8,977-9,039 ft.

Important geological markers of the discovery well are as follows: Heterostegina, 4,468 ft.; Vicksburg, 7,050 ft.; Jackson, 7,592 ft.; Cockfield, 7,735 ft.; Cook Mountain, 7,937 ft., and the Sparta at 8,556 ft.

Ville Platte was the first field in coastal Louisiana to produce from the Sparta sand, and the discovery created a new type of play for the district.

Development subsequent to discovery well
As of May 15 there were 108 producing wells in the field, having a prorated daily average allowable of 15,225 bbl. Production has been extended over approximately 2,500 acres and the field is defined only on the west flank by Continental Oil Co.'s No. 1 J. E. Vidrine. This well was drilled to a total depth of 10,507 ft. The Haas and Tate sands in the Sparta formation carried salt water and the Wilcox sand was found to be dry.

The potentiality of the field was enlarged in June 1939 with the opening of prolific production from the Wilcox sand on the southeast side of the field with the completion of Continental Oil Co.'s No. 3 Hattie Haas. The well cored salt water in the Haas and Tate sands, and was drilled to a total depth of 10,654 ft. The Wilcox formation was topped at 9,975 ft., and the well was completed through perforated casing at 10,055-85 ft., for an initial production of 250 bbl. of 53.2-gravity oil in 19 hours, flowing through a $\frac{1}{4}$-in. choke. Recent developments indicate that production from this sand will extend over a large part of the field proper as well as a large area flanking the southeast and east sides of the field.

NUMBER OF DRILLING AND PRODUCING WELLS BY COMPANIES AS OF MAY 22

Company—	Haas and Tate sand wells	Wilcox sand wells	Drilling
Continental Oil Co.	91	6	8
Texas Co.	4	0	0
Amerada Petroleum Corp.	2	1	1
Danciger Oil & Refining Co.	0	2	1
J. K. Hughes	0	2	1
Total	97	11	11

Lease ownership
Most of acreage controlled by Continental Oil Co., with balance divided among Danciger Oil & Refining Co., Texas Co., Amerada Petroleum Corp., Kirby Petroleum Co., and J. K. Hughes.

Spacing
Field is being developed on a pattern of one well to 20 acres.

Pipe lines
Continental Oil Co. operates 6-in. welded oil line from field to Tepetate in Acadia Parish where it ties into company's main 8-in. system extending to company's terminal at Lake Charles.

GEOLOGICAL INFORMATION

Ville Platte is an elongated anticlinal faulted type of structure extending in a northeast-southwest direction. Production is from the Sparta and Wilcox sands. The Sparta formation is the lower member of the Cook Mountain formation of Eocene age. Production from the Sparta is from two separate sands generally referred to as the Haas and Tate sands. The Haas sand is topped at approximately 8,800 ft., and has a saturated thickness of 18 to 20 ft., while the Tate sand is topped at approximately 8,975 ft., and has a thickness of 55 ft. The two sands are separated by shale breaks. With only a few wells drilled to the Wilcox, information on this horizon is still meager. The formation was topped at 9,975 ft. in Continental Oil Co.'s No. 3 Haas, and as much as 700 ft. of formation was logged before the well was plugged back and completed through perforated casing at 10,055-85 ft. Additional producers have been completed at intervals from 10,100 to 10,200 ft., with the saturated thickness ranging from 20 to 50 ft.

DRILLING CONDITIONS

Derricks
One hundred and thirty-six-foot steel derricks with 30-ft. base mounted on steel substructures are generally used.

Drilling water
Fresh water for boiler requirements obtained from shallow wells ranging from 300 to 400 ft. in depth.

How wells are drilled
Practically all drilling is done by contractors. Nicklos Drilling Co., Loffland Brothers, and Harrison & Dillard are the principal contractors.

Weight and type of mud
Weight of mud from surface to bottom averages from 9.8 to 11.2 lb. Native clay is used while drilling in the upper formation and the weight is increased with commercial mud just above the Haas and Tate sands.

Casing program
It is general practice to cement approximately 1,200 ft. of 10¾-in surface casing, using from 300 to 350 sacks of cement. Open hole is drilled from surface casing to bottom, using 6-in. or 7-in., 17 and 18-lb. o.d. casing as flow string. The flow string is usually cemented on bottom with 500 sacks of cement and plug is drilled after 72 hours.

Type of drilling equipment
Steam rigs are used with power generated by four 100 to 150-hp. boilers.

Average drilling time

Average drilling time on a 9,000-ft. well ranges from 35 to 36 days; on a 10,000-ft. hole from 52 to 55 days.

Bits

An average of 43 bits are used per well.

PRODUCTION PRACTICE

Method of producing well

All wells flow naturally.

Completion methods

It is common practice to cement flow string through the producing horizon, and perforate casing opposite oil sand. No screen is used, and the wells are washed in through 2½-in. tubing. Potential tests are usually made on a $\frac{A}{64}$-in. choke.

Drill-stem tests and electrical logging

Electrical surveys made on practically all wells before the flow string is cemented. Drill-stem testing is used when unusual structural conditions occur.

Water conditions

It is estimated from 10 to 12 wells make a little water.

Gas-oil ratio

Ratio ranges from 0 to 2,500 : 1, depending upon structure.

Surface pressure

Average surface pressures range from 1,750 to 3,000 lb.

Pressure maintenance

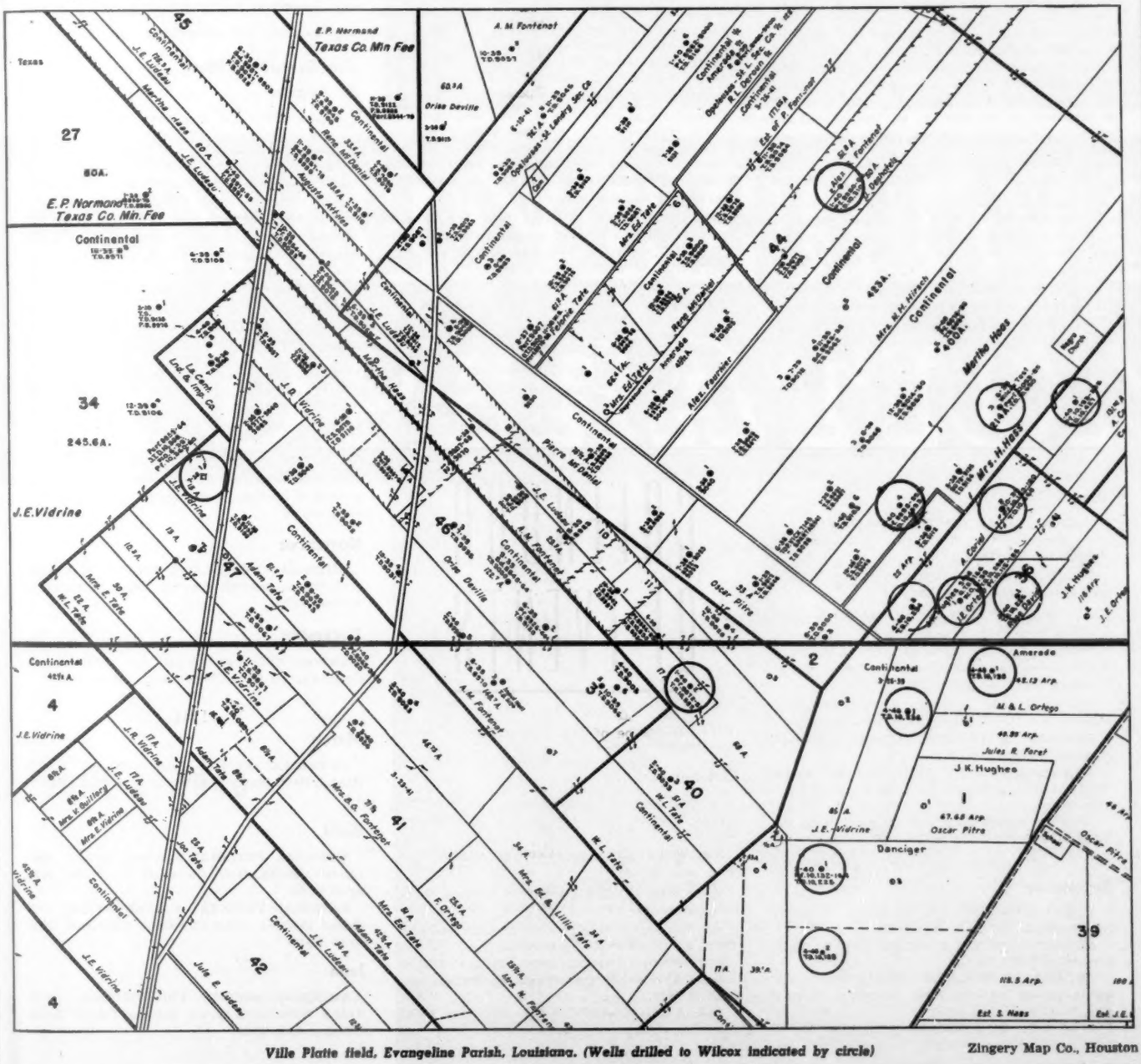
Continental Oil Co. recently placed in operation a major pressure-maintenance project. The plant is being built in units.

Crude-oil analysis

Gravity at 60° F., A.P.I.	43.1
Flash, °F.	room temp.
Fire, F.	room temp.
Viscosity at 70° F., S.S.U.	39.8
Viscosity at 100° F., S.S.U.	34.4
Viscosity at 70° F., Centistokes	4.2
Viscosity at 100° F., Centistokes	2.5
Pour point, °F.	40
Cast	greenish black
Vapor pressure, lb. (A.S.T.M.)	7.8
B.s., per cent	0.3
Water, per cent	trace
Sulfur, per cent	0.165
Carbon residue, per cent	1.0
Hard asphalt, per cent	0.143
Soft asphalt	0.826
Chlorides as NaCl, gms./bbl.	8.5
H_2S released at 650 °F.	trace
HCl released at 650° F., gms./bbl.	1.24

DISTILLATION DATA

Per cent	°F.		
I.B.P.	104	45	440
5	150	50	490
10	192	55	530
15	226	60	562
20	254	65	606
25	286	70	635
30	324	75	656
35	358	80	680
40	400	85	690
			Cracking started


Texas Co. Min Fee
E. P. Normand
A. M. Fontenot
Continental
Texas Co. Min. Fee
Martha Hass
Mrs. H. Hass
J. E. Vidrine
Oscar Pitre
Danciger
Amerada
J. K. Hughes
Jules R. Foret
M. & L. Ortego
Mrs. E. Tate
W. L. Tate
Adam Tate
Mrs. Ed Tate
Mrs. A. G. Fontenot
Mrs. E. Vidrine
Mrs. V. Guillory
Jos. Tate
Mrs. Ed. A. Little Tate
Mrs. W. Fontenot
Jules E. Ludeau
J. E. Ludeau
Mrs. M. H. Hirsch
Mrs. Ed Tate
Pierre McDaniel
Mrs. Geo. McDaniel
Albert Fournier
Orie Deville
Opelousas-St. Landry Sec. Co.
Continental Amerada Gas Co.
Opelousas-St. L. Sec. Co.
Continental R. E. Corrigan Jr. Co. et al
Est. of P. Fontenot
Mrs. Ed Tate
Mrs. Geo. McDaniel
Albert Fournier
Pierre McDaniel
Mrs. M. H. Hirsch
Martha Hass
Mrs. H. Hass
J. K. Hughes
A. Corral
M. & L. Ortego
Jules R. Foret
Oscar Pitre
Danciger
Est. S. Hass
Est. J. E.
Mrs. W. Fontenot
Mrs. Ed. A. Little Tate
Mrs. A. G. Fontenot
Mrs. Ed Tate
Adam Tate
J. L. Ludeau
Jules E. Ludeau
J. E. Vidrine
J. R. Vidrine
Mrs. V. Guillory
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Jos. Tate
Mrs. E. Tate
W. L. Tate
Mrs. Geo. McDaniel
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A. Corral
M. & L. Ortego
Jules R. Foret
Oscar Pitre
Danciger
Amerada

PROGRAMS AND MEETINGS

Natural Gas and Petroleum Association of Canada

LONDON, Ont. — A record attendance marked the seventeenth annual convention of the Natural Gas and Petroleum Association of Canada, held here on May 30 and 31 under the chairmanship of Maj. E. Sweet, of Brantford.

Papers presented at the Friday morning session included "The Importance of Public Relations and How They May Be Improved," by Earl Hodges, Cities Service Co., New York; "Problems I Have Met With in My Years of Service as a Gas Man," by E. C. Steele, Union Gas Co., Chatham; and "High-Pressure Pipe Line Construction," illustrated with motion pictures, by Victor A. Ogilvie, engineer of Gas Advisers Co., New York. At the afternoon session R. L. Bevan of Union Gas Co. conducted a questionnaire on practical problems of the natural-gas industry, methods of installing service line and house piping being discussed by Mr. Burdick of the Dominion Natural Gas Co., St. Thomas, and John Pollard of City Gas Co., London; while customers' servicing was discussed by E. C. Howard of Provincial Natural Gas Co., Fort Erie, and R. M. Perkins of Union Gas Co., Sarnia.

F. D. Howell, of Dominion Natural Gas Co., reported on the progress of the 1940 C-P program; while the certified performance gas range was discussed by John Bogan, New York.

The association approved a brief sent the federal government with reference to proposed modifications of the 8 per cent sales tax imposed on natural gas.

Officers for the coming year are: Honorary president, C. E. Steele, Port Colborne; president, Maj. E. Sweet, Brantford; first vice president, S. B. Severson, Buffalo; second vice president, J. A. Ritchie, Buffalo; secretary-treasurer, S. A. Morse, Chatham; assistant secretary, Joseph McKee, Hamilton; directors, G. D. Wickett, Windsor; J. B. McNary, Hamilton; George H. Smith, Port Colborne; J. A. McNevin, Chatham, and C. N. Glenny, Fort Erie.

Fort Worth Petroleum Engineers Form Club

FORT WORTH, Tex.—After a month of "get acquainted" luncheons the Petroleum Engineers Club at Fort Worth was formed at a recent meeting, officers elected and a constitution and bylaws adopted. Purpose is the unification of those interested in petroleum engineering and the provision of a wider professional and social opportunity for the members. Provision was made for associate members and nonresident members. Weekly luncheons are held at the Westbrook Hotel on Mondays, with monthly dinners followed by brief technical programs and events of a social nature scheduled.

Officers are as follows: G. H. Card, Stanolind Oil & Gas Co., president; C. L. Robinson of Gulf Oil Corp., secretary-treasurer; W. F. Herbert of Texas Co., R. S. Christie of Amerada Petroleum Corp. and R. W. Nichols of Black, Sivalls & Bryson, vice presidents. The other charter members follow:

R. W. Tesch, Jr., A. E. Fisher, H. T. Hunter, C. B. Caruthers and L. F. Fry of Stanolind Oil & Gas Co.; R. G. Gough, Continental Oil Co.; A. E. Willig, P. J. Jones and H. W. Beinschek of Texas Co.; L. A. Ogden and Charles May of Pure Oil Co.; T. W. Rhodes, J. M. Byron and W. B. Watson of Gulf Oil Corp.; G. K. Taggart, Jr., of Amtex Petroleum Co.; J. M. Buckler, independent operator; David Donohue, consulting geologist; D. A. Deckman of Warner-Quinlan Co. of Texas; Harris Pruitt of Harris Pruitt & Co.; Sam Greenidge of Texas Pacific Coal & Oil Co.

B. G. Wells of C. G. Unlaub Co.; T. M. Cone, Mid-Continent Supply Co.; A. G. Evans-Lombe, O. C. S. Manufacturing Co.; R. G. Brandes, Cabot Shops, Inc.; George Oller of Parkersburg Rig & Reel Co.; B. R. Schabarum, G. W. Stevens and Grover Luckner of National Supply Co.; D. E. Tessendorf, Gustin-Bacon Manufacturing Co.; A. H. Keen of General Electric Co.; D. H. Stormont, The Oil and Gas Journal; T. A. Robertson and Dan Hancock of Oil Well Supply Co.; K. N. Mills and E. A. Olsovsky of American Manufacturing Co.; and R. M. White of Franks Manufacturing Co.

A.G.E.M. Annual Convention Has Record Attendance

The Association of Gas Appliance and Equipment Manufacturers held its fifth annual convention in French Lick Springs, Ind., May 20-22, with a record attendance.

The discussions centered exclusively around issues vital to the gas-appliance industry in particular and the gas industry in general. Men prominent in the industry analyzed current problems such as industrial relations, appliance development, sales promotion, resource conservation, and other matters of immediate interest and concern to the industry.

Gas Executives Meet In Atlanta

Approximately 150 executives from gas companies and allied industries throughout the United States gathered in Atlanta, Ga., last week to attend the conference of the American Gas Association for 2 days at the Biltmore Hotel. Eugene J. Stern, of Atlanta, vice president of the Georgia Public Utilities Co. addressed the luncheon meeting.

Speakers from 11 states were heard. Franklin T. Rainey, of Columbus, Ohio, chairman of the industrial gas section of the association, and H. Carl Wolf, of Atlanta, vice chairman, presided.

Speakers were Eugene D. Milener, of New York, secretary of the industrial gas section, and Robert J. Wilson, field secretary of the National Restaurant Association; E. L. Stauffer, of Charleston, S. C.; John F. Mooney, of Orlando, Fla.; W. H. Ligon, of Atlanta; A. V. Leudemann, of New York, and Walter G. Groth, of Toledo, Ohio.

CALENDAR OF EVENTS

June

SOCIETY OF AUTOMOTIVE ENGINEERS, summer meeting, The Greenbrier, White Sulphur Springs, W. Va., June 9-14.

SOUTHWEST PETROLEUM CREDIT GROUP, San Antonio, Tex., June 17-20.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Milwaukee, Wis., June 17-20.

PENNSYLVANIA GRADE CRUDE OIL ASSOCIATION, seventeenth annual meeting, Hotel Emery, Bradford, Pa., June 20-21.

KENTUCKY OIL AND GAS ASSOCIATION, midsummer meeting, Lexington, Ky., June 21-22.

PERMIAN BASIN ASSOCIATION, semiannual meeting, Odessa, Tex., June 21-22.

AMERICAN SOCIETY FOR TESTING MATERIALS, Chalfonte-Haddon Hall, Atlantic City, N. J., June 24-28.

ILLINOIS BASIN CHAPTER OF AMERICAN PETROLEUM INSTITUTE, McCurdy Hotel, Evansville, Ind., June 29.

September

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Spokane, Wash., September 3-5.

AMERICAN CHEMICAL SOCIETY, Detroit, Mich., September 9-13.

NATIONAL PETROLEUM ASSOCIATION, thirty-eighth annual meeting, Hotel Traymore, Atlantic City, N. J., September 18-20.

NATIONAL LUBRICATING GREASE INSTITUTE, annual convention, Stevens Hotel, Chicago, September 30-October 1.

October

NORTH AMERICAN GASOLINE TAX CONFERENCE, Whitley Hotel, Montgomery, Ala., October 3-5.

AMERICAN GAS ASSOCIATION, Atlantic City, N. J., October 7-10.

NATIONAL SAFETY CONGRESS, Stevens Hotel, Chicago, October 7-11.

AUTOMOBILE MANUFACTURERS ASSOCIATION, Auto Show, New York, October 12.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, eleventh annual meeting, Dallas, Tex., October 16-18.

TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION, annual convention, celebrating Texas oil's forty-fifth birthday, Fort Worth, Tex., October 31-November 2.

November

AMERICAN PETROLEUM INSTITUTE, twenty-first annual meeting, Stevens Hotel, Chicago, November 11-15.

December

EXPOSITION OF CHEMICAL INDUSTRIES, Grand Central Palace, New York, December 1-6.

1941

March

AMERICAN SOCIETY FOR TESTING MATERIALS, Hotel Mayflower, Washington, D. C., March 3-7.

April

NATIONAL PETROLEUM ASSOCIATION, semiannual meeting, Hotel Cleveland, Cleveland, Ohio, April 24-25.

NATIONAL PETROLEUM ASSOCIATION, semiannual meeting, Hotel Cleveland, Cleveland, Ohio, April 24-25.

June

AMERICAN SOCIETY FOR TESTING MATERIALS, forty-fourth annual meeting, Palmer House, Chicago, June 23-27.

Samples of drill cuttings are washed at the well before being dried and sacked, preparatory to shipment to a sample laboratory where they are washed and dried again before they go to geologists for microscopic examination

ENGINEERING & OPERATION

JUNE 6, 1940

Complete Dehydration Facilities At Continental's K. M. A. Plants

By D. H. STORMONT

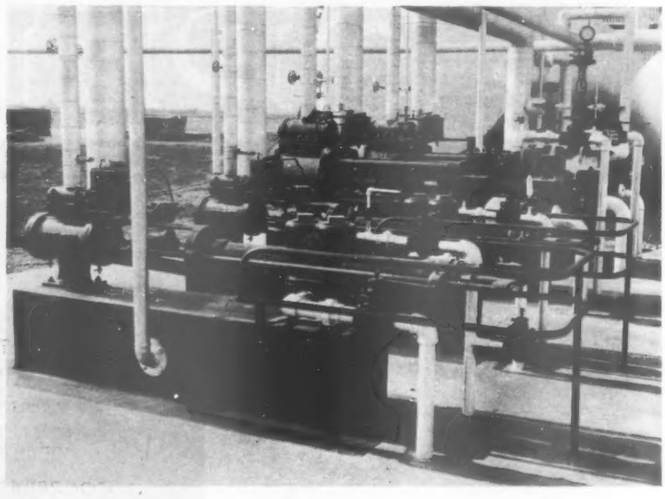
Two new plants, constructed to eliminate gas-hydrate troubles, are unique in that they combine propane refrigeration with diethylene glycol dehydration. Use of glycols as absorptive mediums is common, but these plants use propane refrigeration to increase absorbing efficiency. A third plant uses an entirely different gas-drying principle. Beds of activated alumina remove the moisture and these are dried periodically for regeneration.

IN order to cope with the large amounts of gas hydrates contained in the high-pressure residue gas used in pressure-maintenance operations in the K.M.A. field of North Texas, Continental Oil Co. recently installed refrigeration and dehydration equipment at two of its natural-gasoline and recycling plants in that field and at a third gas-drying equipment was completed. At its main plant and one auxiliary unit propane refrigeration and diethylene glycol units were installed and at the second auxiliary an activated alumina drier was placed in operation.

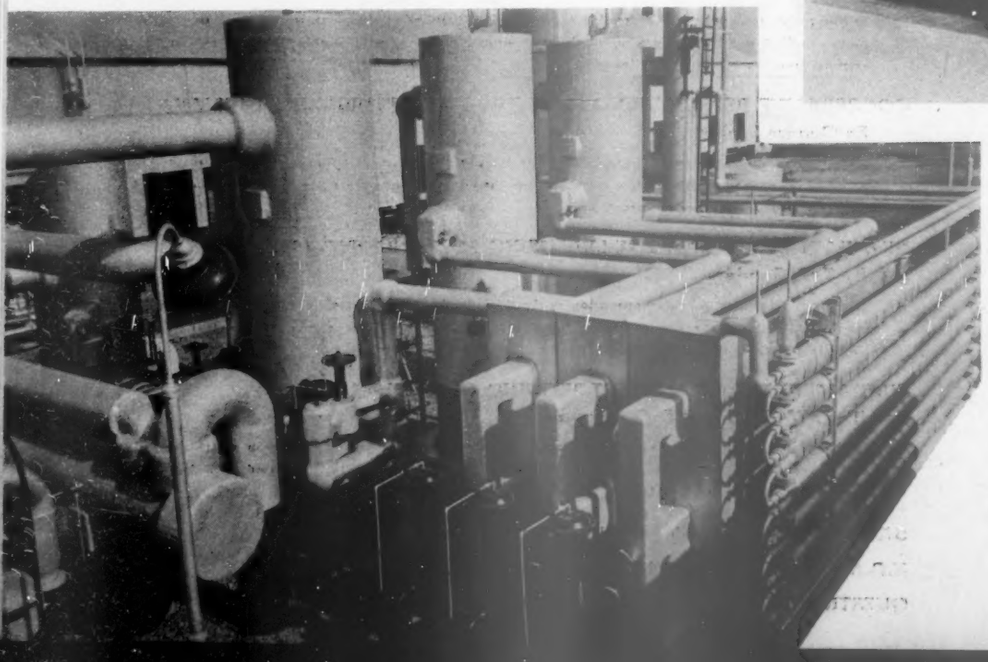
These plants are proving highly effective in preventing freezing of the gas-input lines, which during recent cold months brought pressure-maintenance operations to a standstill, since by removing the moisture contained in the gas the dew point is reduced almost to 0° F. The two glycol units are among the most modern installed for dehydrating gas in natural-gasoline plants, and due to their many temperature and volume-controlling devices they are almost entirely automatic in operation.

These two units are thought to be the first installations in which propane refrigeration is combined with diethylene glycol dehydration for removing moisture from residue gas, although diethylene glycol has been used in other installations for that purpose. By combination of the two methods the efficiency of the absorptive medium is increased by operating at the lower temperatures made possible by propane refrigeration, and in addition the lower temperatures permit a higher gasoline recovery. Under their present operation the plants are reducing the dew point of the 1,800-lb. residue gas to about 4° F. This low dew point would probably permit satisfactory operation of the pressure-maintenance facilities during most of the year, but to insure trouble-free operation at all time additional compression capacity is being added to the propane-refrigeration units. This added chilling capacity is expected to lower the dew point of the high-pressure gas below zero.

Present gas capacity of the main plant is 10,000,000 cu. ft. daily, that of the No. 1 auxiliary 4,000,000 cu. ft. and capacity of the No. 2 unit is 12,000,000 cu. ft. daily. Additional compression equipment being installed at the plants, however, will increase their gas-handling capacity to 14,000,000, 8,000,000, and 18,000,000 cu. ft., respectively. This added capacity was necessitated by the increased number of gas-injection wells and larger volumes to input wells already in operation, for although work on the cooperative project was started over a year ago it is just now reaching full-scale proportions. (For a description of the status of this large cooperative endeavor see the Apr. 4, 1940, issue of The Oil and Gas Journal, p. 34.) Capacity of the refrigeration and dehydration units, though, is sufficient to handle the enlarged volumes.



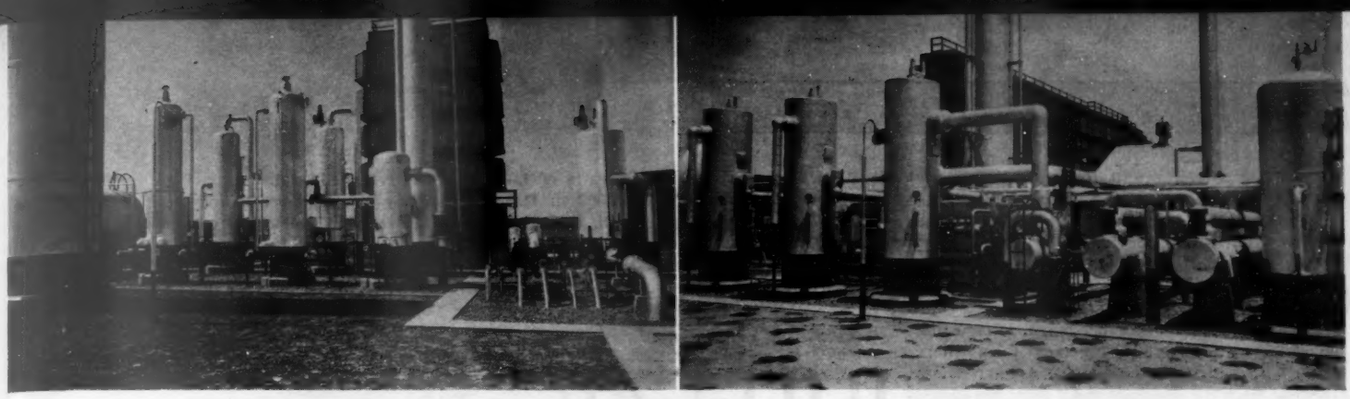
Right: Pumping equipment for the refrigeration and dehydration unit at the No. 2 auxiliary. Below: The refrigeration and dehydration unit at the No. 2 auxiliary, showing venting and accumulating tanks in background with exchangers in right foreground



Flow of Gas

Flow of gas through the compression, refrigeration, and dehydration units at the main plant is illustrated in the accompanying flow diagram. In the compression cycle the gas is boosted to 35 lb. in the first stage, intercooled and any liquids removed, and then compressed to 300 lb. in the second stage. Upon leaving the water separator, diethylene glycol is introduced into the gas stream at the approximate rate of 3 gal. per minute. Turbulence and velocity of the gas flow is sufficient to cause the glycol to become thoroughly diffused in the gas without use of mechanical means.

The glycol-laden wet gas is passed first through a horizontal heat exchanger, entering at about 80° F., where it is partially cooled by dry gas exiting from the unit. The gas upon leaving the exchanger is split into two streams, the greater portion going direct to the propane gas chillers and the remainder bypassing through heat-economizing equipment, the volume flowing to either being regulated by a motor valve actuated by the pressure drop across an orifice. By so doing a portion of the gas is again precooled by the zero-temperature gasoline-glycol stream before it is taken to the chillers. Cooled gas from the economizers then rejoins the main gas stream going to the chillers.



Left: Dehydration facilities at the No. 1 auxiliary plant consist of oil absorption after which the gas is dried in activated alumina dryers. Right: Vent accumulators, gasoline separator, heat exchanger, and propane-gas chillers at the main plant

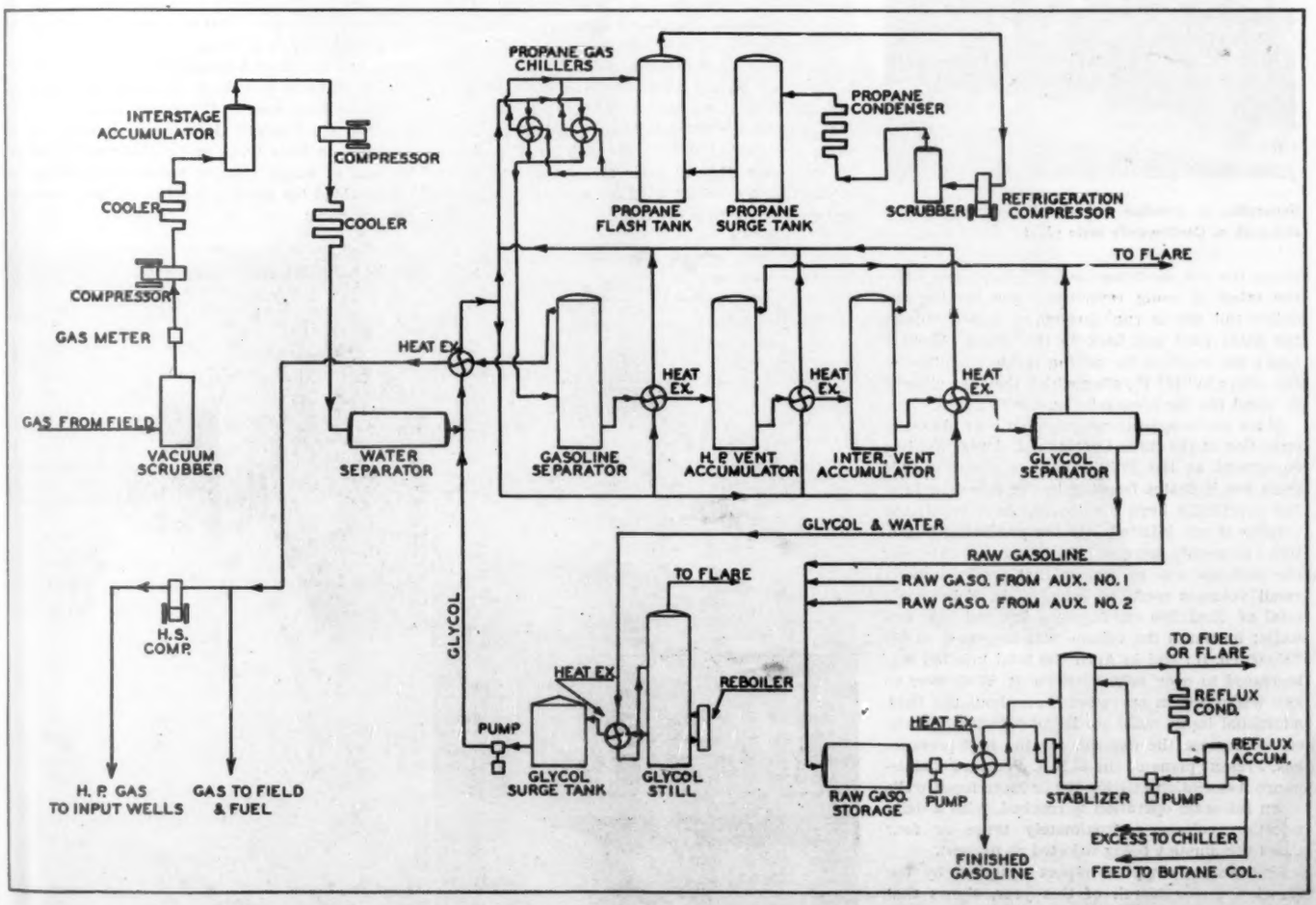
Two horizontal chillers are used at the main plant for reducing the temperature of the wet gas to approximately 0° F., the gas flowing through the tubes and the propane vapors through the shell. A conventional propane refrigeration system is used for chilling the gas, the propane vapors being continuously circulated through a compression and expansion cycle as shown in the flow diagram. About 16,000 lb. of propane per hour are compressed to around 180-lb. pressure and then dropped to 10 lb. in the flash tank to provide chilling.

The refrigerated wet gas from the chillers enters a gasoline separator, operated at a pressure slightly less than 300 lb., where bulk of the gaseous fractions separates from the gasoline-glycol mixture. From there the latter stream passes through high and intermediate-pressure vent accumulators, operated at 135 and 70 lb. pressure, respectively, where additional gaseous fractions leave the gasoline. From the intermediate vent accumulator the gasoline-glycol mixture is run to a horizontal 25,000-gal. separator, where by means of a weir the gasoline is separated from the dilute glycol. Capacity of the tank is sufficient to allow ample time for gravity separation of the two phases. The weir, placed at the exit end of the tank, maintains a liquid level about 12 in. from the top of the vessel. Dry gas is likewise vented from this tank, operated at 35 lb. pressure, joins that from the accumulators and is run to the plant flare.

Dry gas from the gasoline separator, after passing through the initial heat exchanger, is used for plant fuel or boosted to about 1,800 lb. in the third stage of the compressors and returned to the field for injection into pressure maintenance wells. Volume of gas flashed from the accumulators and glycol-separating tank is not sufficient to warrant recompressing. However, by passing these vapors through heat exchanging equipment (through which a portion of the wet gas flows as pointed out earlier) a portion of the chilling load is removed from the refrigeration equipment. A temperature of about 15° is obtained on the glycol separator, due mainly to heat absorbed from the wet gas in the economizers.

Raw gasoline from the glycol separator joins that piped from the two auxiliary plants and flows to a storage tank from which it is charged to the stabilizer for processing into finished natural gasoline. (A description of this phase of the plant's operation and that of the two auxiliary plants was given in the Oct. 20, 1938, issue of The Oil and Gas Journal, p. 46.) The glycol, containing moisture removed from the wet gas, is taken from the bottom of the separator tank and charged to a still. A base temperature of about 270° is maintained on the still to drive off the moisture. Concentrated glycol is then removed through the base of the still and run to a surge tank, from where it is picked up by a 6 by 1½ by 10-in. reciprocating pump and again charged into the wet gas stream.

The refrigeration and dehydration unit at Continental's No. 2 auxiliary is identical in layout and operation to the above, except that only one propane gas chiller is used and no stabilizing equipment is provided. Propane for the refrigerating unit is made in special runs at the main plant

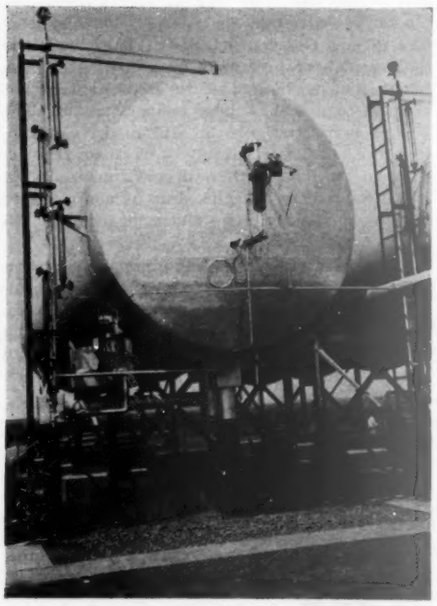


Flow diagram, showing flow of gas through the compression, refrigeration, and dehydration units at the main plant

and trucked to No. 2 unit for replenishing any losses from evaporation and leakage. Since the propane is recycled and in closed systems, these losses, of course, are very small.

For drying the gas at the No. 1 auxiliary unit an absorption oil tower and activated alumina drier are provided. Wet gas from the second compression stage (at 300-lb. pressure) after being cooled, is run to a dewatering tank, from where it is charged to the absorber. Gas is then taken overhead from the absorber and a portion charged to one of the two alumina driers. Volume of gas passed through the drier is regulated by manual control, only sufficient volume being dried to prevent freezing in the high-pressure input lines. The hot dry gas then rejoins the remainder and is compressed to about 1,375 lb. for injection into pressure-maintenance wells.

The two alumina driers are operated on 12-hour shifts, the wet gas being passed through one while the other is being revivified. For heating the driers tail gas is run through a heater outside the plant yard and back to the driers. About 3 hours are required for raising the temperature of the driers to 212° F., after which they are allowed to stand for the remainder of the 12 hours.



Separation of gasoline and glycol is accomplished in this tank at Continental's main plant

Since the dehydration equipment was placed in operation at the three Continental plants, and like equipment at the Phillips-Sunray plant, trouble from gas hydrates freezing in the injection lines has practically been eliminated. As a result the volume of gas injected into the producing formation has greatly increased. In January of this year the problem was so serious that only relatively small volumes could be injected. In February a total of 27,821,000 cu. ft. were injected into key wells; in March the volume was increased to 47,795,000 cu. ft., and in April the total injected was increased to over 100,000,000 cu. ft. With over 60 key wells now in operation throughout the field, additional input wells are being occasionally added to increase the demand for the high-pressure gas. Present plans of the K.M.A. Pressure Maintenance Association call for 100 or more input wells when full-scale operation is reached, with a daily injection volume approximately three or four times the amount being injected at present.

Most recent complete report compiled by the association, for March of this year, shows that 1,208,537 bbl. of oil were produced during the month with an average gas-oil ratio of 1,086 cu. ft. per barrel. A total of 708,532,000 cu. ft. of gas was produced during the month, of which only 47,795,000 cu. ft. were returned to the reservoir. In February the average per-well gas-oil ratio was only 887 cu. ft. per barrel, not accounting for any gas returned to the producing formation, so that many operators are taking steps to remedy their well ratios. Mechanical equipment has met with some success, but most work is along the lines of stopcocking or choking to determine the most efficient producing ratio.

SAFETY — Inclined Walk and Flood-Lights at Gasoline Plant

MILLIONS of gallons of gasoline are manufactured daily in plants all over the United States and the department responsible for this operation enjoys a very low accident-frequency rate. The fact that more people are not injured is due to several things: careful planning of the plants to make the operation safe, constant watchfulness on the part of the men to prevent accidents, and the low rate of turnover in the personnel.

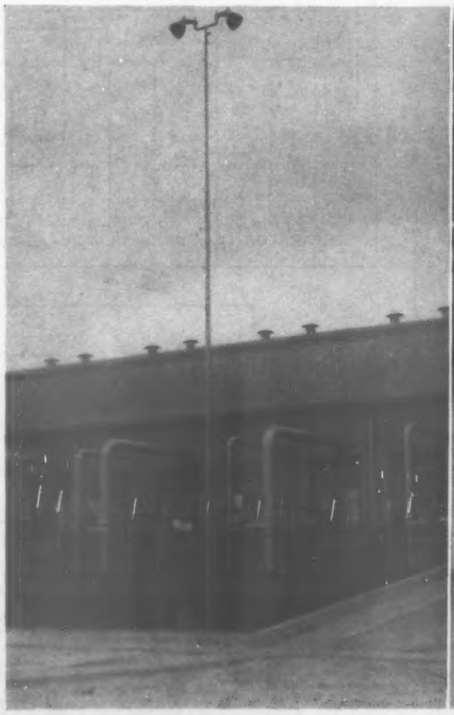
One plant recently installed on the Gulf Coast has two safety features built into it that are worthy of note. One is the method of lighting the absorption, distillation, and stabilization equipment, and the other is an inclined walkway for moving equipment into the main engine room. The interior of the building also has several notable safety installations.

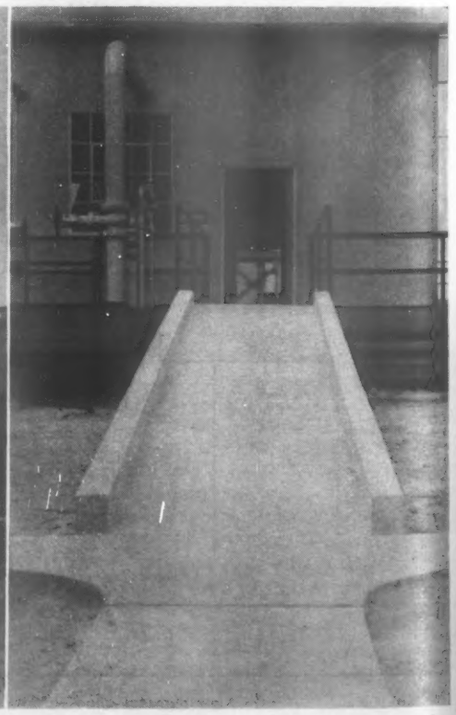
The absorption and distillation equipment is located in the open and there is little danger from fire or explosion due to an accumulation of gas. However, much of this equipment operates under comparatively high pressure and a few failures can be expected. When a line or vessel containing inflammable products begins to leak, it is very dangerous to have a potential source of ignition, such as an electrical circuit, in the vicinity. The plants operate on a 24-hour basis and trouble at night means that a good illumination without danger of any short circuits is essential.

This is accomplished in the plant in question by having floodlights on tall poles at the proper places. There are enough of these lights to illuminate the outside equipment and all of the grounds around the plant. Having a number of lights reduces the shadows to a minimum and the men working about the plant can see almost as well in the night as they can in the day.

The plant is built in accordance with modern practice and the intake and discharge lines from the compressors are located on top of the ground instead of being covered with soil which will cause corrosion and a short life to the metal. Steel steps and bridges are constructed over the manifolds at each entrance. This provides easy access to the compressor room under ordinary circumstances.

However, the engines occasionally require replacement of the heads or other bulky or heavy pieces of equipment must be carried into the plant. To prevent injury to a man or men carrying heavy loads into the plant, a special inclined concrete runway is built at one door. A piece of equipment requiring four men to lift it can thus be carried into the plant safely. Heavier equipment can be loaded on a dolly truck and pulled up the incline. In case of major repairs, special equipment can be provided for moving machinery into the compressor room.





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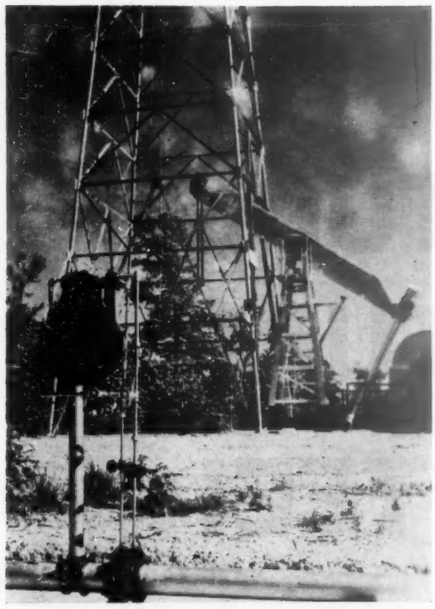
Cooperative Repressuring Plan Yielding Returns in Louisiana

By GEORGE WEBER



Above: An injection well in the field, showing recording orifice meter in foreground, installed on the input line. Right, Fig. 1—Separation and distribution system of high-pressure well in Lisbon field.

A COOPERATIVE repressuring project is yielding returns to operators in the Lisbon field of North Louisiana. Reversal of a production decline of many months has resulted from foresight, good engineering practice, and unity of action among field operators.

Lisbon, one of North Louisiana's major oil fields, was discovered in December 1936. Its history is one of boom development and subsequent rapid decline. Several factors contributed to the reversals at Lisbon. Close drilling, on a 20-acre spacing pattern over much of the field, was not justified on the basis of reserves, and was found unnecessary for proper drainage. This was sensed after it had been practiced to a large extent, and operators reverted to 40-acre spacing for later drilling development.

5,000-Bbl. Daily Production

Pipe-line proration and reductions in crude prices contributed further to the field's decline in importance, and reservoir pressure in the Pettit lime zone dropped rapidly in the absence of an effective water drive. Production declined from a top daily average of 13,931 bbl. in September 1937 to a low of 2,780 bbl. in August 1939. Due to increased pipe-line purchases, production improved late in 1939, and averages a little over 5,000 bbl. daily at present.

Of a total of 265 wells completed as producers in the field, 220 are now on production, and only about 65 are flowing. Low permeability of the Pettit lime, despite the high saturation and a porosity averaging 19.5 per cent has made pumping a difficult problem in the field. Repressuring with gas is the best solution to recovery of added reserves.

Deep Gas Production Employed

A cooperative venture begun last year has made possible the current repressuring program at Lisbon. In the summer of 1939 operators in the field and other interested parties subscribed to a cooperative company, Lisbon Exploration Co., whose purpose was to drill a deep test in the field. This was prompted by the success in finding deeper reserves in other North Louisiana fields.

The deep test, No. 1 Vaughn, was drilled to a total depth of 8,900 ft., and three sands in the lower Marine formation showed productive possibilities. The Vaughn sand at 8,444-64 ft. was perforated and a gas-condensate well with an initial production of 15,500,000 cu. ft. of gas was completed.

Prior to completion of the well the possibility of finding high-pressure gas was considered, and plans were already under way to employ the gas in a repressuring project in the Pettit zone of the field. Completion of the well was then followed by careful production studies and by a detailed survey of the Pettit zone. This work formed the basis for the repressuring project now beginning in the field.

Repressuring Plan

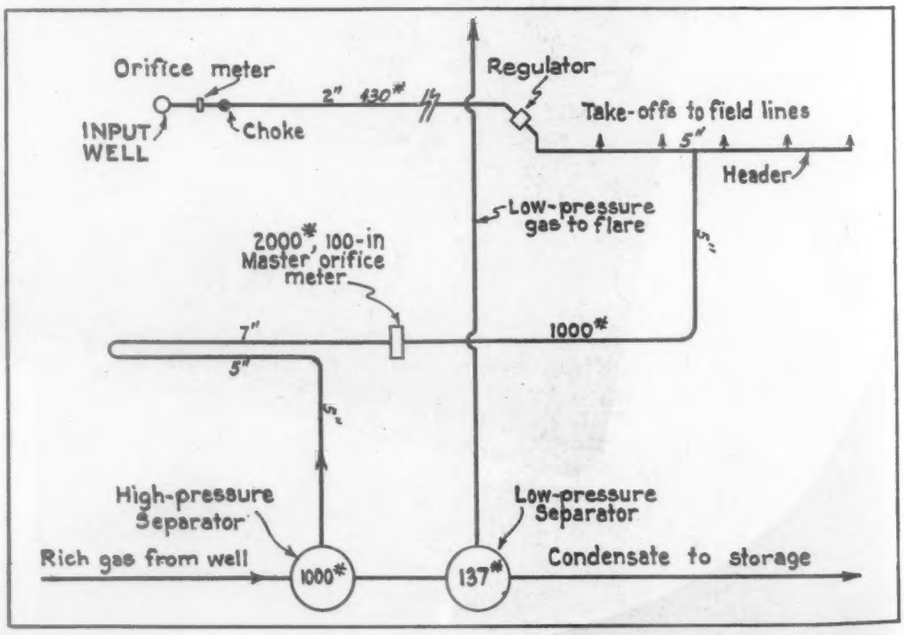
Repressuring at Lisbon has been under way for only a few weeks, but although initial results cannot be taken to apply to long-term operation the reaction is already apparent. The plan involves injection of the deep gas, after removal of condensate, to the Pettit horizon through several wells spaced through the low-pressure area of the field.

Fig. 1 is a plan of the separation and distribution system at the deep gas well, showing equipment and average operating conditions. The rich gas from a well-head pressure of 2,550 lb. per sq. in. is passed to the high-pressure separator operating at 1,000 lb. per sq. in. where a condensate

(Continued on Page 42)

TABLE 1—INJECTION WELLS IN LISBON REPRESSURING PROJECT

Owner, well number, and lease—	Gas injection (M.c.f.)		Injection well head pressures (lb. per sq. in.)			Initial injection date
	March	April	Initial	Apr. 1	May 1	
Atlantic Refining Co.'s No. 1 F. B. King	3,330.0	6,695.1	117.5	175.0	210.0	Mar. 5
Atlantic Refining Co.'s No. 1-A J. T. Bean	1,781.2	6,341.2	138.0	184.0	213.0	Mar. 20
F. H. Brown's No. 1-B H. E. Patton	1,164.0	4,348.4	240.0	335.0	300.0	Mar. 25
Gulf Oil Corp.'s No. 4 H. E. Patton	3,740.6	4,707.4	74.5	140.0	152.0	Mar. 2
Hollyfield & McFarland's No. 2 H. W. Patton		1,761.4	115.0	....	178.0	Apr. 22
T. L. James' No. 2 H. W. Patton	3,658.7	4,566.6	239.5	292.0	268.5	Mar. 1
Magnolia Petroleum Co.'s No. 5 S. M. English	2,170.7	5,468.5	75.0	183.0	210.0	Mar. 14
A. O. Olson's No. 1-A T. F. Patton	2,099.4	4,131.9	237.0	330.0	335.0	Mar. 12
Scout Oil Corp.'s No. 1 R. Vaughn	3,029.8	19,478.2	80.0	278.0	485.0	Mar. 17
Sloan & Zook Co.'s No. 2 H. S. Patton	.....	3,752.3	365.0	...	385.0	Apr. 12
Vaughn & Marr's No. 2 F. B. King	3,448.4	6,731.2	182.0	315.0	340.0	Mar. 9
Total	24,422.8	67,972.2				



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fraction is removed. The condensate is flashed to 137 lb. per sq. in. in the second separator and moved to storage maintained at 3 lb. per sq. in. Gas from the low-pressure separator is flared.

The high-pressure gas from the first separator is metered at 1,000 lb. per sq. in. and distributed to the field lines through a manifold serving six trunk lines. Individual takeoff lines from this header are equipped with regulators to maintain the desired pressure for the wells they serve. Pressures on the four lines now in use range from 400 to 580 lb. per sq. in.

At each injection well a choke is installed one joint upstream from the recording orifice meter.

Fig. 2 shows the field plan with 18 injection wells connected. The field system consists of 2-in. lines. Additional wells as needed in other sections of the field will be added to the injection plan.

Initial Results

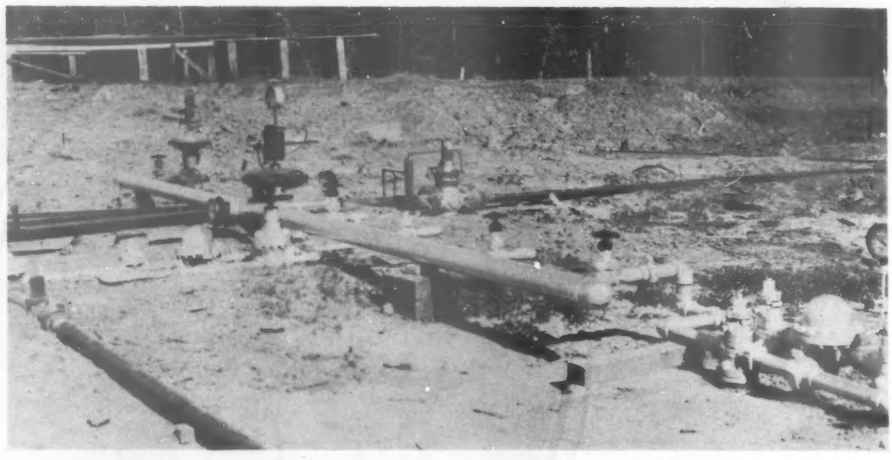
Although the project is still in its initial stages, pressures on injection wells and production from offset property are already showing encouraging results. Because the work is confined to the areas of the field with low per-well production, the effect on total field production is not yet appreciable. However, production rates on those wells immediately affected are doubled and trebled in some cases and two wells formerly abandoned have been brought back on production.

To date there is no indication of channeling of gas through the porous lime. Some injection wells showed pressure drops after taking gas for a short period, but later indicated gradual pressure build-up, while the remaining wells have shown constant and gradual pressure rises. Table 1 contains pressure and gas-volume data on 11 injection wells.

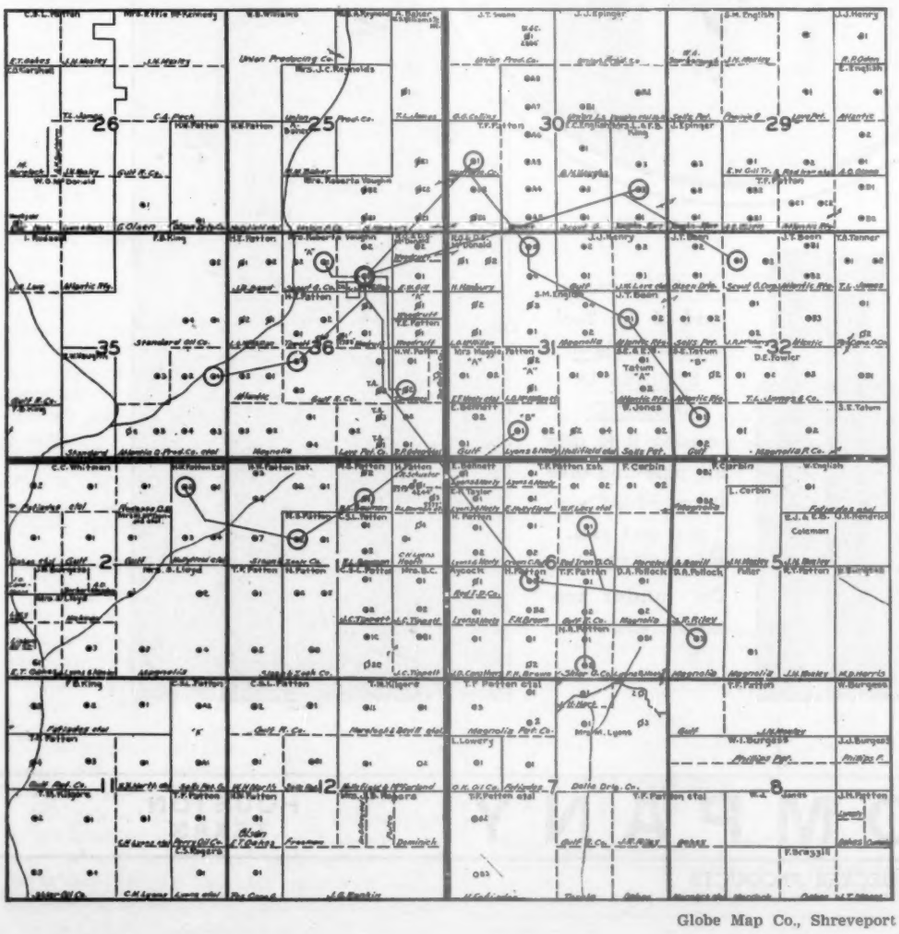
It should be noted that gas volumes injected to these wells is relatively low, ranging from 4,131,000 cu. ft. to 19,478,200 cu. ft. per month for wells taking gas throughout April. The field injection system used 24,422,800 cu. ft. during March and increased injection to 67,972,200 cu. ft. in April as additional wells were included in the plan. The deep gas well is fully capable of providing gas for several more injection wells. Current injection rates average 3,000,000 cu. ft. daily and the well is furnishing gas for field purposes to the extent of an additional 1,000,000 cu. ft. daily, yielding a condensate production of about 80 bbl. of 57-gravity product per day.

TABLE 2—OFFSET WELL REPORT

Company, well, farm—	Bbl. per 7 days 2-12 to 2-18	2-19 to 2-25	2-26 to 3-3	3-4 to 3-10	3-11 to 3-17	3-18 to 3-24	3-25 to 3-31	4-1 to 4-7	4-8 to 4-14	4-15 to 4-21	4-22 to 4-28	4-29 to 5-5
Atlantic Refining Co.:												
No. 2 J. T. Bean	50	14	63	63	19	50	33	58	47	69	51	72
No. 1 H. E. Patton	Temp. abandoned. (Returned to pump 4-3-40)							47	116	107	74	96
No. 2 H. E. Patton	32	29	32	30	42	53	86	80	127	114	142	103
Magnolia Petroleum Co.:												
Nos. 5 and 6 S. M. English	77	77	50	125	64	(No. 5 converted into key well 4-14-40)						
No. 6 S. M. English	...	...	...	...	...	37	37	43	43	60	69	62
Gulf Oil Corp.:												
No. 1-A H. E. Patton	65	44	39	27	33	29	68	50	46	60	83	47
No. 3-B H. E. Patton	39	39	39	28	33	40	52	38	44	73	46	44
Nos. 1 and 2 J. J. Henry	125	121	113	124	124	124	124	124	124	124	130	136
T. L. James:												
No. 1 H. W. Patton	10	10	22.5	22.5	12.5	27.5	35.4	38	38	41	38	40
Tippett:												
Nos. 1 and 2 H. E. Patton	Temp. abandoned. (Returned to pump 4-13-40)											
No. 2 H. E. Patton	28	28	28	28	28	29	28	77	145	161	131	141
Nos. 1 and 2 H. W. Patton	112	112	112	112	137	136	135	140	140	140	105	145
Total	528	464	498	559	492	525	598	695	870	949	873	886



Above: The manifold at the gas well provides for distribution of the gas to six trunk lines, each with its regulated pressure. Left: Fig. 2—Field plan for repressuring the Pettit lime horizon of the Lisbon field, Claiborne and Lincoln parishes, North Louisiana.



Globe Map Co., Shreveport

Offset Production

Production of offset wells may be examined as an indication of the effect that repressuring may have on the field as a whole in the future. Of a total of 15 offset wells, two of which were brought back on production on April 3 and 13, and one well converted to a key injection well on April 14, production has increased almost 100 per cent in less than 2 months.

Table 2 lists aggregate weekly production of the offset property to injection wells. A very complete record of injection pressures and volumes, offset production, and other pertinent data is being compiled on this subject by F. H. Miller, who is in charge of field operations for Lisbon Exploration Co. Initial investment in the system, following completion of the well, has been nominal, and operating costs are low, contributing to success of the cooperative conservation project.

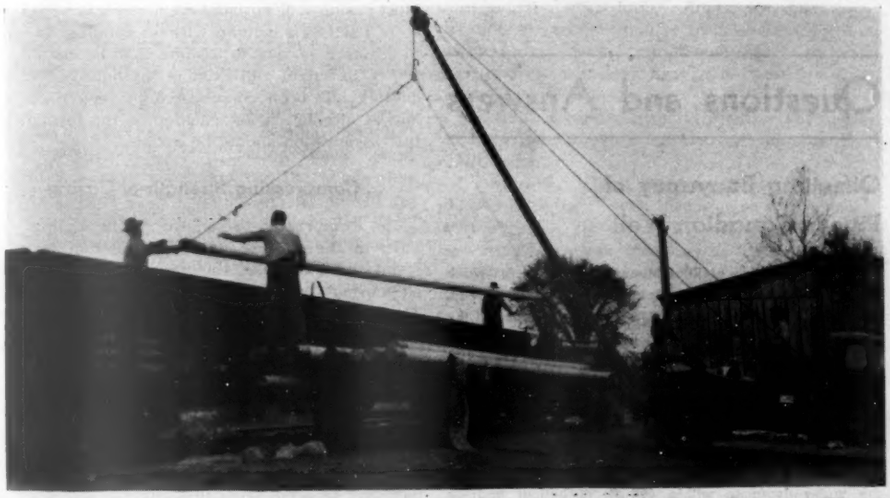
New Illinois-Indiana Pipe Line Using Mill-Wrapped Pipe

By T. P. SANDERS

IN order to help handle their large production in the Salem field where they operate 72 per cent of the productive acreage, the Texas Co. is building a 6-in. gasoline line from the Indian refinery at Lawrenceville, Ill., to Mount Vernon, Ind., on the Ohio River. At Mount Vernon a combined blending plant and loading terminal is being constructed. Here one to three million barrels of gasoline per year will be loaded in barges for river transportation. It is expected that a large portion of the barges will be unloaded at Pittsburgh for the eastern market. The Ohio River is a factor of ever-increasing importance in the transportation of crude and refined products from the new Illinois fields.

Construction of the 56 miles of 6-in. line is under the direction of Lawrence Pipe Line Co., subsidiary of the Texas Co. Williams Brothers are the general contractors. Completion is expected shortly after June 1. All pipe for the line is being supplied by Youngstown Sheet & Tube Co., and has been coated and wrapped at the mill by Hill, Hubbell & Co., division of General Paint Corp.

Below: (Top) Unloading pipe at Solitude, Ind. The joints are cleaned, coated, wrapped and capped at the mill. (Bottom): Trucks never stop while off of the highway. As shown, the truck is drawn by a "cat" while crossing the soft fields to string pipe



Above: (Left) The ditching machine is drawn by a "cat" to prevent it from working its way down into the soft muddy places. (Right) Pipe-line scene near Solitude, Ind. The mill-wrapped pipe is capped on each end to keep out water and soil

Mill Coating of Pipe

Mill coating and wrapping of pipe includes an initial cleaning to remove all scale and other foreign matter, application of a uniform coating of asphaltic material, and wrapping under uniform tension. Proper cleaning is necessary to obtain a perfect bond between pipe and coating. Since coating can be applied in the plant under closely controlled temperature, the asphalt used can be of higher melting point, making it more resistant to abrasive influences. The entire coating, including wrapping paper, is slightly less than ¼ in. thick. Ends of the joints are left uncoated for a distance of 9 in. so that the heat from welding will not disturb the coating. After the joints are welded together, the uncoated interval is painted with a thick asphalt coating and wrapped by hand.

The pipe joints used on this line are unusually long, ranging from 45 to 50 ft. in length. When received, both ends of each joint are closed by Van Dyke caps. These are made of light sheet metal to fit over the ends where they are tacked on with a welding torch. Just before the joint is welded to the assembled line these caps are knocked off with a hammer or chisel. This protection is considered important on a gasoline line where soil or other foreign matter in the line would be more objectionable than in a crude-oil line.

Stringing Pipe

Because of wet, spongy ground, a system was worked out for stringing pipe which has reduced sticking of trucks to the minimum. The trucks are loaded at a railroad siding and they usually carry the pipe some distance over hard-surfaced or gravel roads before they reach the point where they turn off of the highway to string pipe across

the farm lands. At this point each truck is met by a "cat" which ties on in front and pulls it until it has unloaded all of its pipe and reached another highway. Usually it is only necessary to draw the truck across one section, since there are improved roads along each section line. The pipe is unloaded "on the run," the driver's helper rolling off each joint as it is needed. Stopping to unload a joint could result in getting stuck in many cases. By avoiding the possibility of getting trucks stuck the right-of-way is kept in good condition.

The line is being buried about 30 in. deep in a ditch cut 21 in. wide by the ditching machine. Much hand shoveling is necessary in some places due to caving. Bending of the pipe to meet topographic conditions is accomplished in the usual manner without any injury to the pipe coating.

Left: These men worked together on the South American Gulf line in the Andes and are now working on the Lawrence line. At left is W. E. Devine, a crew foreman for Williams Bros., and at right is D. S. Patton, chief inspector for Lawrence Pipe Line Co. Mr. Devine was a camp superintendent for Engineers Ltd. in South America while Mr. Patton was chief inspector

All joints are welded using the stovepiping procedure. By this method the joints are welded to the main stem one at a time instead of being made up into long sections, consisting of several joints each which are welded on in the ditch.

Since the Wabash River is out of its banks, no work has been done on the river crossing. Crews are working from both ends of the right-of-way toward the middle, and it is expected that they will meet at or near the crossing. A single line will cross the river and will be buried at least 30 in. deep in the river bed. The ditch will be made with a dredge.

Railroad and highway crossings are very numerous. At each crossing the 6-in. pipe is run through a 9-in. protective casing. This casing is mill coated and wrapped like the 6-in. On railroad crossings the annular space between the two strings is closed by welding and a vent is placed at each side of the track at the fence line. If a leak occurred under the tracks in the 6-in., the gasoline would be discharged off of the railroad property. On road crossings the vent is dispensed with. For all hard-surfaced roads and railroads the crew bores under, but for small roads the ditch is cut across, unless it is requested that boring should be used.

Mount Vernon Terminal

At the Mount Vernon terminal an Ethyl blending unit is being installed. The gasoline, received as all the same grade, is blended to three different grades for marketing. Storage at the terminal will be handled by four 35,000-bbl. tanks and three 15,000-bbl. tanks. A floating loading barge will be used on the river. A railroad tank-car loading terminal will also be constructed at this plant.

River transportation of barges will be both by contract agreements and by company equipment. The extent of the river system makes possible a large marketing area. The barges can reach the eastern states or they can go north on the Mississippi to Minneapolis. Crude-oil shipments on the Ohio are also increasing. The Sohio Corp. is now loading about 15,000 bbl. of crude per day at its Mount Vernon, Ind., terminal. This crude is coming from the productive area around Griffin, Ind.

Questions and Answers

Offsetting Buoyancy of Pipe in Canadian Well

We have a well at Pilot Mound, Manitoba, in which there is 1,454 ft. of 8½-in. pipe and 2,000 ft. of 7-in. o.d. pipe; total depth is 2,035 ft. Salt water in the hole raises to within 400 ft. of the surface, and we had trouble obtaining a shutoff but finally effected one by putting about 10 ft. of wheat in the hole and then setting the pipe down so the wheat is forced up around the pipe. Assuming that the water rises 1,600 ft. in the hole, what would the pressure or weight be at the casing point? After completing the above shutoff we bailed the water down to within 400 ft. of bottom and no water seemed to be coming in. Would it be advisable to turnbuckle the casing down to offset the buoyancy of the pipe? Would 1,600 ft. of water cause it to have a floating tendency? Would turnbuckling the pipe down have a tendency to buckle it?—P. L. W., Winnipeg, Man., Canada.

The density of sea water is 1.03 and it weighs 0.037 lb. per cu. in. Pressure exerted by 1 ft. of sea water is 0.444 lb. per sq. in. and for 1,600 ft. the pressure would be 710.4 lb. per sq. in. If the fluid is standing 1,600 ft. in the hole, this is the pressure on the formation and the pipe at the casing point. The concentration of salts in the water determines its density and the water in your well may be more or less than the value given.

The 2,000 ft. of casing will have a total weight of 40,000 lb. and it will displace 30,266 lb. of salt water. However, the water level around the pipe is 1,600 ft. from bottom so the buoyancy affects only four-fifths of the length of the casing. The displacement due to the casing would therefore be only 24,212 lb. Subtracting this from the total weight of the pipe leaves 15,788 lb. resting on bottom.

Minimum Weight of Fluid

While the empty pipe is much more buoyant than pipe filled with water, salt water or mud, it will float only in cases where the fluid in the hole is extremely heavy, 74 lb. per ft. fluid being the minimum weight of the fluid which would cause the empty pipe to float.

When the well is bailed dry, providing your shutoff holds, the pressure at the casing point will be as above stated, 710.4 lb. per sq. in. on the outside of the casing and on the inside it will be practically zero, as such pressure as is present will be that due to the column of air in the pipe.

The compressive strength of pipe is equal to its tensile strength, when the column is supported laterally. The country in which you are working is "hard rock" country and it is doubtful if you have had much trouble from the hole caving. In addition you have the hole cased to 1,454 ft. This point is mentioned because it is one of the reasons why pipe is not set with its full weight on bottom in most cases.

T. P. Sanders points out in The Drilling Equipment Directory, Page E-2, that "If the string is closely supported throughout its length by the walls of the hole, no trouble will result from placing it in compression. However, if bad caving has been ecountered, of it the hole has been greatly enlarged due to salt beds or other soluble materials, care must be used in letting off the tension. Most casing will not support much more than 200 ft. of itself as a column without bending. In most localities it is safe to assume that no cavities of 200 ft. in height will exist in the hole, but where drilling has been complicated by severe caving, loss of circulation, or leaching of the formations, this assumption should be avoided."

Compressing Strength of Casing

The compressive strength of the casing you have in the well is more than enough to withstand the weight of the casing plus such force as you may be able to put on it with turnbuckles. The only danger is that you may actually lift the outer string of 8½-in. pipe if too much force is applied. This is following the assumption that you will turnbuckle the two strings of casing together.

The use of wheat to obtain a shutoff is rather unusual and it may be only a temporary thing. Another good method is to pack shale around the casing, the shale being obtained by separating the bailings; in some areas two pits are used for this purpose, lime and sand cuttings being dumped in one pit and shale in the other, thus making a supply of shale available throughout the drilling of the hole. A very thick Aquagel mixture is also useful for this purpose. You are probably following the standard cable-tool method of recovering the casing when the well is completed. If other methods fail, and a pump is available, a shutoff can be obtained by cementing the lower portion by the regular or the squeeze method. The pipe can then be shot loose with from 1 to 3 qt. of nitroglycerin.

Fundamentals of Solvent Refining Operation

By E. W. GARD and E. G. RAGATZ
Union Oil Co. of California

SOLVENT refining is the term generally applied by the petroleum industry to a process which utilizes a fluid solvent for the separation of a petroleum fraction into two or more components through the appropriate development of a two-phase liquid state of the petroleum fraction-solvent mixture, one phase of which contains desired components, and the other phase undesired components. More specifically, this term applies to an operation in which the solvent can be recovered for reuse with no change in its physical characteristics, and in which all separated petroleum fractions retain substantially the same chemical form as in the original feed stock. . . .

Solvent extraction was first commercially applied to the production of superior quality kerosene. In this operation objectionable aromatics and olefinic compounds, as well as malodorous sulfur bodies, were extracted in relatively small amounts from the kerosene stock by a simple countercurrent washing of kerosene with SO_2 in a simple tile-packed column. As a further important development of this particular operation, the extracts from kerosene, and more recently from gasoline, have become valuable sources of aromatic-type materials for the production of aromatic solvents and special aviation-gasoline cuts. The terms "extract" and "raffinate" as applied respectively to the higher solvent concentration and lower solvent concentration phases in the solvent-refining process derive from the early application of the Edeleanu process to kerosene treatment.

Following its successful application to kerosene refinement, the Edeleanu SO_2 process was adapted to the treatment of naphthenic-base lubricating distillates and spray oils as a substitute for the older, more expensive acid treatment of these materials. Later, as a wide demand for still higher quality oils developed, refiners again turned to solvent extraction for the production of such materials. The application of solvent refining to the production of these still higher quality oils, however, required the substitition of other solvents for SO_2 in that the selectivity of SO_2 rapidly dropped as the quality of the lube-oil raffinates increased.

This need for a more selective solvent for the production of higher quality lubricating oils resulted in an extensive research program by the petroleum industry, with the eventual development of a considerable group of satisfactory solvents of which we might mention SO_2 benzene, nitrobenzene, chlorex, phenol, propane, cresylic acid propane, and furfural. Also, the more exacting treating requirements associated with higher quality raffinate production, particularly from mixed-base crudes, led to a more or less extensive elaboration of the older simple-packed column hookup.

An ideal solvent must have many distinctive characteristics, the more important of which include:

1. High efficiency and selectivity for the quality of product desired.

2. High degree of stability under handling and operating conditions.

3. Ready gravity separation of its extract-raffinate phases.

4. Residual traces left in the finished oil should have no deleterious effect on the oil's performance characteristics.

5. Should be readily recoverable from the extract and raffinate oils.

6. Should be noncorrosive to the equipment.

7. Should be nontoxic.

8. Should be fluid at atmospheric temperatures.

9. Should be cheap.

As with most engineering decisions, selecting the proper solvent for a particular operation from among the solvents with which we are familiar requires a considerable compromise with this ideal. Assignment of correct relative evaluations to two or more solvents for items 2 to 9 of the above list is relatively straightforward, and will cause little concern to the average process engineer; the assignment of correct relative values for the efficiency and selectivity ratings of several different solvents, however, is a more difficult problem, particularly when applied to the newer, more complicated processes. It is the intent of this paper to offer some clarifying thoughts on this particular phase of the solvent-refining problem.

Solvent refining, absorption, and rectification have much in common, with the earlier, more simple-solvent operations being akin to absorption, and the later, more complicated operations paralleling rectification. In developing our analysis of the more complicated solvent-refining operation, we will draw heavily on many parallelisms with rectification.

The more complicated solvent-extraction operation has the following features in common with rectification:

1. Separation is obtained by establishing a two-phase equilibria of such a character that a more or less marked difference in concentration exists between the various fractions in the two phases.

2. Each process employs an equilibria-contacting operation in which the two phases move in continuous countercurrent flow to each other through a series of actual or theoretical equilibria zones.

3. Within given limits:

(*a*) An increased yield of a given quality product for a given solvent or reflux ratio, or a decreased solvent or reflux ratio requirement for a given yield, can be obtained by increasing the number of equilibria zones in the refining system.

(*b*) An increased yield of a given quality of product from a given number of equilibria zones can be obtained by increasing the solvent or reflux ratio.

4. Increased solvent or reflux ratios for the attainment of higher commodity yields of a given quality product can be obtained in the case of:

(*a*) Solvent extraction, by subtracting heat from the final extract equilibria zone (or adding an appropriate rejection agent such as water at this point) and physically introducing more solvent into the first equilibria zone of the solvent extraction equipment.

(*b*) Rectification, by adding heat to the reboiling zone and extracting heat from the refluxing zone of the rectifying column.

5. Maximum efficiency of separation is obtained by introducing the feed stock into a intermediate equilibria zone so that countercurrent washing is effected on both end products before discharge from the end zones.

6. The selectivity of each operation can be changed for a given solvent or reflux ratio by varying an independent condition of state, namely:

(*a*) The selectivity of the solvent-extraction operation can be changed by varying the temperature in the extraction zone, with increased temperature giving increased selectivity.

(*b*) The selectivity of the rectification operation can be changed by varying the column pressure, with decreased pressure giving increased selectivity.

7. When carried to an extreme, variation of these two independent conditions of state leads to an end condition under which separation ceases, namely:

(*a*) In solvent extraction, development of treater temperatures high enough to produce miscibility, i.e., to change the two-phase system to a single-phase.

(*b*) In rectification, development of column pressures equal to or exceeding the critical, again leading to the development of a single-phase system.

In this particular parallelism, however, we find the solvent-extraction operation differing from the rectification operation in that failure of extraction separation occurs just beyond the temperature of maximum separation efficiency, whereas, failure of rectification separation occurs under a pressure extreme at the other end of that required for maximum selectivity.

An element of complexity in the development of proper relative evaluations of two or more solvents for the performance of a particular operation resides in the fact that a given solvent exhibits various degrees of selectivity for various types of separations. This requires paying particular attention to the attainment of optimum conditions of operation for each of the solvents in question for the particular operation under consideration. Now a thorough understanding of the close parallelism existing between solvent extraction and rectification makes it possible to clearly distinguish between solvent extraction problems associated with the attainment of maximum efficiency of operation of a given solvent, and problems associated with a comparison of

A.C.S.—Presented before organization meeting of Petroleum Section of American Chemical Society at Oakland, Calif.

the relative selectivity (or adaptability) of several solvents to a given operation, each solvent operating under its most efficient controls.

We have developed some extremely interesting examples of these relationships in the course of our solvent-refining research, a few of the more pertinent of which are presented herewith:

Definitions

Our experience with solvent-refining operations has indicated the advisability of rather carefully defining three distinctly separate relationships which combine to make up the overall "efficiency evaluation" of a solvent, namely:

Yield efficiency.—This factor is an absolute term and denotes the ratio, multiplied by 100, of the actual yield of a given quality product to the maximum yield of the same quality product obtainable from a given feed stock. This factor represents the "efficiency of recovery" and is the ultimate measure of productivity of a given solvent operation.

Extraction ratio.—This is also an absolute term, and is measured by the solvent ratio used to produce a given "yield efficiency" of a given quality product from a given feed stock, divided by the minimum solvent ratio required by the particular solvent in question to produce that same "yield efficiency" when all variables associated with the operation are adjusted to give a minimum solvent ratio. This ratio expresses the "efficiency of utilization" of a particular solvent when applied to a particular extraction operation.

Selectivity ratio.—This ratio is a relative term, as contrasted with the two previous absolute terms, and is expressed as the required solvent ratio of the less effective solvent divided by the required solvent ratio of the more effective solvent when operating under identical "yield efficiencies" and "extract ratios" for the production of a given product from a given feed stock. This ratio measures the "comparative adaptability" of two or more solvents to a particular refining operation when each solvent is utilized with the same degree of effectiveness.

Increased Yields With Increased Solvent Ratios

Fig. 1 presents a diagrammatic layout of an experimental 12-stage continuous extraction unit

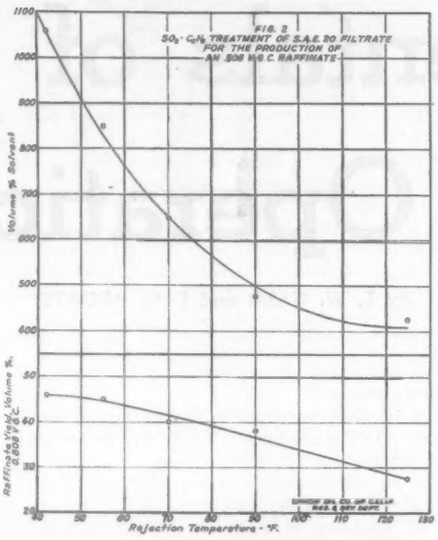


FIG. 2
SO2-C6H6 TREATMENT OF S.A.E. 20 FILTRATE FOR THE PRODUCTION OF AN .808 V.G.C. RAFFINATE
Volume % Solvent
Raffinate Yield, Volume %, 0.808 V.G.C.
Rejection Temperature - °F.
UNION OIL CO. OF CALIF. RES. & DEV. DEPT.

constructed for the purpose of treating mixed-base distillates with SO_2 and SO_2—C_6H_6 for the production of 80-100 v.i. finished oils. This unit varied in several important details from the earlier simple SO_2 treating columns in that:

1. Settling chambers were provided for effecting sharp extract—raffinate separation between each countercurrent contacting stage, thus obtaining the maximum benefit from each individual contact.

2. Provisions were made for cooling the extract leaving settler No. 2, separating the resultant "rejected" raffinate at settler No. 1, and returning this raffinate to the main solvent extraction system.

3. The feed was introduced into an intermediate point in the treating system.

As indicated, the series of tests under discussion utilized 11 combination mixing and settling stages on extraction service (i.e. above the feed point) and one cooling and settling stage on extract rejection service—with the feed being introduced into the raffinate reject from the final extract settler.

The complementary-yield curve of Fig. 1 shows the relationship existing between volume of solvent employed and raffinate yield when running for a fixed 0.808 v.g.c. (87.5 v.i.) raffinate. In going from a 400 volume per cent solvent ratio to a 1,060 volume per cent solvent ratio, the yield of this particular quality raffinate was increased from 27 to 46 per cent.

Fig. 2 presents the complementary relationships between volume of solvent, raffinate yield, and rejection temperature associated with the raffinate yield—solvent-ratio curve of Fig. 1. It will be noted that the extraction stage was held at a constant temperature of 125° F. throughout this series of runs, and that the least efficient run maintained the same temperature in the rejection stage as in the extraction stages, i.e. operated as a "simple" 11-stage extraction unit, similar to the original kerosene columns.

This series of tests clearly illustrates the parallelism existing between solvent extraction and rectification as regards the development of increased yields with increased solvent ratios, and the forcing of increased solvent ratios by proper manipulation of the rejection (reboiling) section of the equipment.

Optimum Point of Feed Introduction

Fig. 3 presents a diagrammatic layout of a continuous laboratory unit which was also utilized for the production of 800-100 v.i. finished oils from mixed-base distillates. In this unit, however, phenol was utilized for the treating agent in place of SO_2, and two 40-ft. treating columns were substituted for the alternate mixer-settler units of the SO_2 machine. As with the SO_2 unit, provisions were made for rejecting raffinate from the final extract cut, and for maintaining independent temperature controls on the treating columns and final extract settler.

Of the four test runs reported on this figure, runs 1 and 2 utilized extract-temperature reduction for rejection control, and were run for the purpose of developing data on the proper point for feed introduction. In run 1 the incoming feed was introduced into the rejected raffinate in the same manner as the previously discussed SO_2—C_6H_6 runs, while in run 2 the feed was introduced between the two 40-ft. column sections. Changing the feed inlet from the bottom of the lower tile

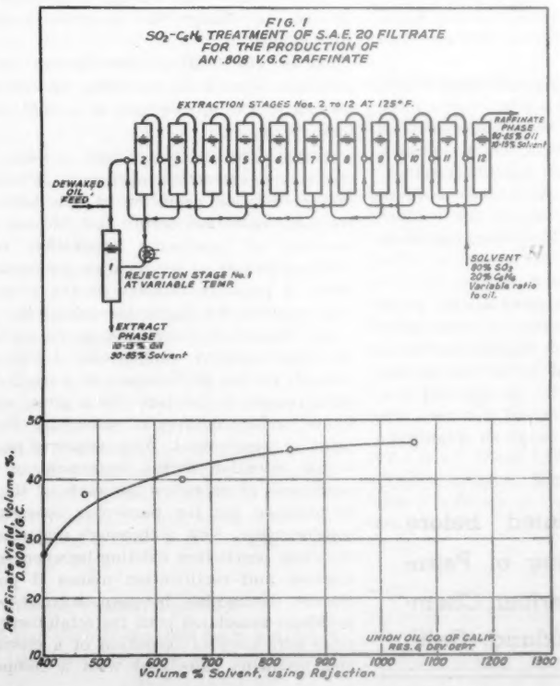


FIG. 1
SO2-C6H6 TREATMENT OF S.A.E. 20 FILTRATE FOR THE PRODUCTION OF AN .808 V.G.C RAFFINATE
EXTRACTION STAGES Nos. 2 to 12 AT 125°F.
RAFFINATE PHASE 90-85% Oil 10-15% Solvent
DEWAXED OIL FEED
REJECTION STAGE No. 1 AT VARIABLE TEMP.
SOLVENT 80% SO2 20% C6H6 Variable ratio to oil.
EXTRACT PHASE 10-13% Oil 90-85% Solvent
Raffinate Yield, Volume %, 0.808 V.G.C.
Volume % Solvent, using Rejection
UNION OIL CO. OF CALIF. RES. & DEV. DEPT.

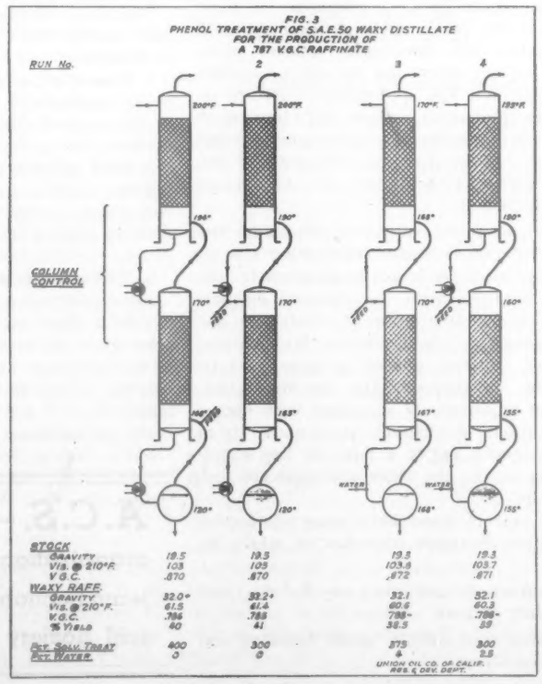


FIG. 3
PHENOL TREATMENT OF S.A.E. 50 WAXY DISTILLATE FOR THE PRODUCTION OF A .787 V.G.C. RAFFINATE
RUN No.
COLUMN CONTROL
STOCK
WAXY RAFF.
Pct. Solv. Treat
Pct. Water
UNION OIL CO. OF CALIF. RES. & DEV. DEPT.

section to the top of this section decreased the solvent requirement from 400 volume per cent to 300 volume per cent while producing a slightly higher yield of a slightly better quality raffinate.

This comparison clearly shows the necessity of introducing the feed stream into an intermediate column section for the attainment of minimum "extraction ratios"—particularly when working on a high-efficiency demand operation.

Effect of Treater Temperature

Runs 3 and 4 of Fig. 3 were made on the same phenol-treating unit and stocks as previously discussed runs 1 and 2, but focused on developing the effect of change of column temperature on solvent ratio while utilizing water injection instead of temperature reduction for rejection effect at the extract settler. In run 3 the entire system, including extract settler, was maintained at a substantially constant temperature of 167° to 170° F. while in run 4 the extraction section was carried at 190° to 195° F. and the settling and rectification section at 155° to 160° F. The feed was introduced into the midsection of the column for both runs.

Here again a marked reduction in solvent requirement was effected by proper manipulation of the column controls, the 375 volume per cent ratio of run 3 being reduced to 300 volume per cent by the noted increase in the extraction-column temperature.

It will be noted that the rectification-colum temperature of run 4 was somewhat lower than that of run 3. Unquestionably the 300 volume per cent ratio of run 3 could have been further reduced if the rectification temperatures of run 4 had been raised at least as high as those of run 3. Also the extraction-column temperatures could have been raised by 5° to possibly as much as 15°, which increase, in turn, would have led to a still further reduction in solvent ratio (although these latter temperatures would have been dangerously close to miscibility).

This comparison clearly indicates the necessity of carefully adjusting the treater temperatures when seeking to operate with minimum "extraction ratios."

Phenol Versus SO_2 and SO_2-C_4H_8 Treatment of Mixed Base Dewaxed Distillates

Fig. 4 presents yield and complementary solvent ratio data associated with the production of 70 to 90 v.i. raffinates from a dewaxed mixed-base distillate. The low viscosity index SO_2, SO_2—C_4H_8 data represent the commercial operation of a four-stage simple mixer-settler unit, while the high viscosity index points are from the experimental treater illustrated on Fig. 1. The phenol data represents actual operation of a commercial plant utilizing a hookup similar to that illustrated on Fig. 3.

Fig. 4 aptly illustrates the differences which

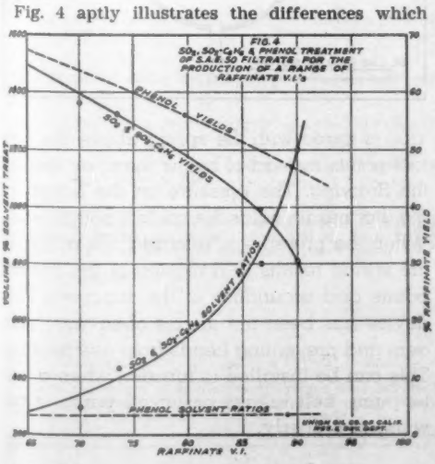


FIG. 4
SO2, SO2-C4H8 & PHENOL TREATMENT OF S.A.E. 50 FILTRATE FOR THE PRODUCTION OF A RANGE OF RAFFINATE V.I.'s
PHENOL YIELDS
SO2 & SO2-C4H8 YIELDS
SO2 & SO2-C4H8 SOLVENT RATIOS
PHENOL SOLVENT RATIOS
VOLUME % SOLVENT TREAT
% RAFFINATE YIELD
RAFFINATE V.I.
UNION OIL CO. OF CALIF. RES. & DEV. DEPT.

can exist in the relative selectivity ratio of two solvents when applied to the production of different quality raffinates from the same base feed stock. In this comparative series of tests, the SO_2—C_4H_8 raffinate production ranged from 70 to 90 v.i., while the phenol-raffinate production covered a range of only 80 to 90 v.i. For purposes of comparing these two operations, however, both the solvent ratio and yield curves of the phenol operation can be extrapolated back into the 70 v.i. region with confidence.

It will be immediately noted that the required phenol and SO_2—C_4H_8 solvent ratios are practically identical for the production of a 65 v.i. raffinate, whereas the required SO_2—C_4H_8 ratio for the production of a 90 v.i. is 4½ times that of phenol. At the same time, the ratio of SO_2—C_4H_8 yield to phenol yield drops from 0.93 to 0.60 in going from a 65 v.i. to a 90 v.i. raffinate. Although this series of experiments was not carried far enough to assure that both the SO_2—C_4H_8 and phenol solvents were operated with identical "extraction ratios," the wide divergency of solvent requirements in the region of 90 v.i. clearly indicates phenol to be markedly superior to SO_2—C_4H_8 for this particular operation, while considerable question (at least as far as Fig. 4 is concerned) would surround the choice of solvent for the 65 v.i. operation—particularly since we have reason to believe that the extraction ratio of the SO_2—C_4H_8 could have been decreased in the 65 v.i. region by a better adjustment of extraction temperature and change of position of feed inlet.

In addition to developing a marked difference in selectivity ratio between SO_2—C_4H_8 and phenol for 65 and 90 v.i. raffinate production, Fig. 4 also reveals another striking difference between these two solvents, namely, the marked change in solvent ratio required by SO_2—C_4H_8 v. the constant-solvent ratio indicated for phenol. The reason for this marked difference in solvent-ratio relationships can be developed by a careful analysis of the data on Fig. 5.

Relationship Between Raffinate Quality and Solvent Requirements

Fig. 5 presents yield data on the production of various quality waxy raffinates from a single waxy distillate when utilizing various phenol solvent ratios in the small continuous laboratory equipment illustrated on Fig. 3. These five runs cover a solvent-ratio range of 150 to 500 volume per cent and a waxy raffinate v.g.c. range of 0.797 to 0.779 (87 to 101 dewaxed viscosity index).

Plotting the yield, solvent ratio, raffinate quality data for these runs in the form presented on Fig. 5 develops a common characteristic of all of the solvents which we have studied, namely: Over a relatively wide range of raffinate v.g.c., a substantially straight line relationship exists between raffinate v.g.c. and volume per cent raffinate yield for any given solvent ratio. Beyond this range, however, all solvents exhibited a marked "break" in slope, with this "break" occurring at different v.g.c. values and different solvent ratios for different solvents. In the case of phenol treatment of the distillates in question, this break occurs in the region of 0.790 v.g.c. (92.5 dewaxed v.i.), while for SO_2, the break occurs in the region of 60 dewaxed v.i. The significance of this break-point location becomes apparent when we analyze the three different volume per cent treat curves of Fig. 5.

As indicated by these treating curves, increased raffinate yields are obtained with increased solvent ratios for all raffinate v.g.c.'s. However, the percentage yield improvement in going from 150 volume per cent treat to 500 volume per cent treat is much larger in the case of a 0.784 v.g.c. raffinate than an 0.820 v.g.c. raffinate (approximately 80 per cent v. 8 per cent). Furthermore, it is impossible

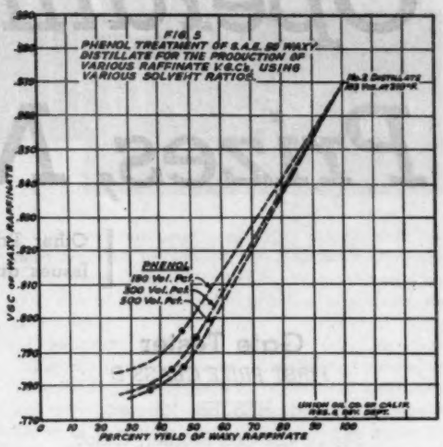


FIG. 5
PHENOL TREATMENT OF S.A.E. 20 WAXY DISTILLATE FOR THE PRODUCTION OF VARIOUS RAFFINATE V.G.C.'s USING VARIOUS SOLVENT RATIOS
No. 2 Distillate
PHENOL
150 Vol. Pct.
300 Vol. Pct.
500 Vol. Pct.
V.G.C. OF WAXY RAFFINATE
PERCENT YIELD OF WAXY RAFFINATE
UNION OIL CO. OF CALIF. RES. & DEV. DEPT.

to produce waxy raffinate lower than 0.783 v.g.c. when utilizing only a 150 volume per cent treat. By studying the differences in solvent ratio, yield, raffinate v.g.c. relationships existing above and below the indicated break point on Fig. 5, we can postulate that in general the solvent ratios required for the attainment of a given "yield efficiency" will rapidly increase with relatively small increases in raffinate quality whenever we attempt to apply a solvent to a separation calling for operation in the region below the solvent's "break point." Relative "break point" locations explain the marked differences in solvent ratios exhibited by the SO_2—C_4H_8 and phenol-run data of Fig. 4.

It should be understood, of course, that all points on each of the volume per cent treat curves of Fig. 5 are for equal extraction ratios, with the various v.g.c.—yield relationships for any one volume per cent treat curve being obtained by a proper manipulation of the treater-rejection control.

Obviously the above illustrations have been hand picked to obtain clear-cut examples of the several important independent relationships associated with the solvent-refining operation. Usually the significance of these individual relationships is disguised by the general complexity of the problem presented by their combination. It is hoped that our data on this subject may be of some assistance in orienting your general ideas on the solvent-refining operation, and possibly assisting you in the solution of some concrete problem associated with the subject.

In closing we desire to acknowledge the many valuable contributions which various members of the research and development department of the Union Oil Co. made to the general solvent-refining picture as presented in this paper.

●

BOOK REVIEW

THE HISTORY OF ALBERTA OIL. By F. K. Beach and J. L. Irwin, 62 pp. Issued by the Department of Lands and Mines, and published by Publicity and Travel Bureau, Edmonton, Alberta.

This booklet presents a very clear picture of oil development in Alberta. The earliest development in the province was in 1890, when natural gas was discovered at Medicine Hat, followed in 1912 by the Bow Island gas field which provided Calgary and Edmonton with gas. Oil development did not begin until 1914 when A. W. Dingman drilled the discovery well in Turner Valley. It was not until 1922 that production assumed importance. The first production was obtained from gas wells, but in 1930 oil wells were discovered, in which gas was of secondary importance.

The report contains a brief discussion of oil production and a map of the Turner Valley field.

Operating Kinks Winning Prizes, N. G. A. A. Meeting

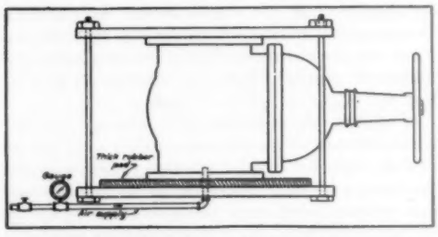
[**Other Prize-Winning Kinks Have Appeared in Previous Issues and More Will Be Published in Succeeding Issues**]

Gate Tester

FIRST PRIZE CLASS D

J. M. HESTER, laborer
Skelly Oil Co., Shidler, Okla.

Equipment has been devised for testing gate valves which makes it possible to conduct testing operations about three times as fast as it is possible to do so in the usual way. In the course of a year a considerable amount of labor is saved by using the improved method. The device for this purpose can be made readily from material available



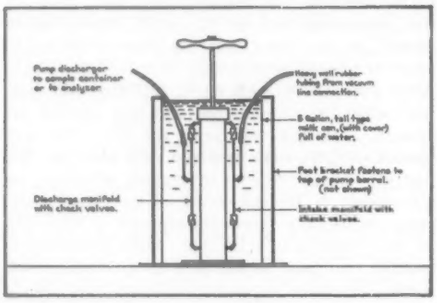
at any shop or plant. This device can be mounted on a work bench. It consists of ¼-in. rubber gasket material which is held across a valve opening by steel straps and bolts which serve as clamps. The rubber gasket is perforated by a nipple connected with a supply of compressed air. When air pressure is applied to the valve on one side and water covers the other side of the gate, the presence of leaks can be detected by bubbles rising in the water.

Pump Arrangement for Sampling

THIRD PRIZE, CLASS D

H. E. CHAMBERS, superintendent
Skelly Oil Co., Lyman, Okla.

It is often necessary to take gas samples from the vacuum lines to the natural-gasoline plant for test of air content or for other reasons and a small hand pump is usually necessary for line walker or plant tester to get samples. This pump must be absolutely airtight to get a representative sample. The pump can be made absolutely airtight by changing the intake and discharge lines and check valves. These can be placed so that they come up along the side of the pump barrel in such a way that the entire pump and the intake and discharge lines can be submerged in water with only the pump handle out of the water. A 5-gal. milk can with tight-fitting cover is ideal for this purpose as the water can be carried in it from the plant without slopping over.


Pump discharge to sample container or to analyzer
Heavy wall rubber tubing from vacuum line connection.
5 Gallon, tall type milk can, (with cover) Full of water.
Foot bracket fastens to top of pump barrel. (not shown)
Discharge manifold with check valves.
Intake manifold with check valves.

The saving of time in taking samples in this manner is as much value as the taking of the sample itself. A sample taken that is not representative is worthless and may even cause conclusions that will be erroneous.

Mercury Trap for a Manometer Tube

HONORABLE MENTION, CLASS D

CLYDE E. WHITECOTTON, engineer
Skelly Oil Co., Fairfax, Okla.

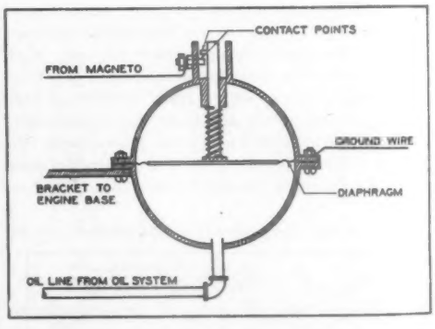
This particular manometer is used for a load indicator for the plant intake. It is therefore subjected to extreme and sudden pressure changes which will either blow the mercury out the high side or suck it up into the line. This mercury trap is to recover the mercury that is pulled over when vacuum is greater than 15 in. of Hg and when pressure is greater than 15 in. of Hg. The mercury is drawn off at bottom drain cocks and the tube refilled again; this saves expense of mercury and time to get another supply. The following material is used in the construction of the mercury trap: 6—⅛-in. steel pipe couplings; 2—1¼ by 8-in. plain-end nipples; 2—⅛-in. brass pet cocks; 4—⅛-in. pipe to ¼-in. o.d. copper tubing connections; 12 in. ¼-in. o.d. copper tubing; 8 in. 2-in. angle iron.

Automatic Shutdown Device

SECOND PRIZE, CLASS A

J. R. GREEN, chief repairman
Skelly Oil Co., Carter Nine, Okla.

An automatic shutdown device has been used effectively on oil, water, gas, and vacuum lines. The principle of operation is shown in the accompanying drawing and requires no explanation. In actual use this device is made with the spring above the contact points instead of below them, as seen in the drawing. The pressure on the bottom of the diaphragm holds the contact points apart. When the pressure is released, the action of the spring results in a closing of the contact points and grounding of the magneto. This device has been the means of saving cylinders and preventing heads from overheating. This can be installed to function when a water-pump belt breaks or an oil pump is not working properly.



QUESTIONS ON TECHNOLOGY

By W. L. NELSON, TECHNICAL EDITOR

W. L. NELSON

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to W. L. Nelson, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists, and all those engaged in the various phases of plant operation; also those connected with the marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible. Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, extended computations, or a detailed study cannot be considered. When the matter is of general interest, a reply will be published within a reasonable time.

Relation of Reid to True Vapor Pressure

I have been told that the Reid vapor pressure is not the real vapor pressure. What is the real vapor pressure?—M. G. R.

The real or true vapor pressure of a mixture such as gasoline is equal to the sum of the vapor pressures of the constituents each multiplied by its respective mol fraction. Thus, for a 26-70 grade of gasoline (average 24-lb. R.v.p.) the true vapor pressure may be computed from the analysis as follows:

	MOL FRACTION	VAPOR PRESSURE	
Butanes	0.3	60	18.0
Pentanes	0.39	17	6.6
Hexanes plus	0.31	4	1.2
Vapor pressure of 24-lb. Reid gasoline, pounds			25.8

This disagreement is due primarily to the fact that a small amount of the gasoline vaporizes during the Reid vapor-pressure test, thus leaving a lower vapor-pressure liquid in the bomb after the bomb has been shaken. The lighter or high vapor-pressure hydrocarbons are the ones that vaporize most easily.

Not much experimental work has been done on this problem but Oberfell, Alden and Hepp presented detailed information in "Comparison of Vapor-Pressure Testing Methods" before the eighth annual meeting of the American Petroleum Institute on January 31, 1928. Their information as well as other scattered data indicate that the true (calculated) vapor pressure ranges from 5 to 9 per cent higher than the Reid vapor pressure.

Occurrence of Brucite

Where can we obtain brucite in commercial quantities for refinery processing?—H. N. F.

This material has been used to a very limited extent as a neutralizing agent in place of sodium hydroxide. It is preferred over lime because of its greater solubility in water (or solubility of the reaction products in water) and because it usually has a somewhat higher strength when used in lump form.

Deposits of pure brucite (magnesium hydroxide) are not common or extensive, but this mineral has been reported in New Jersey, New York, Pennsylvania, Nevada, and California. To my knowledge only one of these deposits is being exploited commercially.

Magnesium hydroxide (brucite) could be manufactured from magnesite (magnesium carbonate) by calcining and hydrating. Deposits of magnesite are more numerous—being found in Canada, Massachusetts, Washington, and Oregon—and generally associated with brucite or similar magnesium minerals. Dr. T. F. Gardner, who has been active in the early development of the use of brucite for treating, feels that somewhat impure or dolomitic limes may prove to be suitable. Such limestones are widely distributed over the United States.

Federal Fuel Oil Specifications

I hear that the U. S. Government has issued new standards for fuel oils. How do these differ from the old specifications?—V. K.

A copy of the new specifications, Commercial Standards CS 12-40 (5th ed.), can be obtained from the Government Printing Office, Washington, D. C., for 5 cents. The date of the old standard was 1938.

Changes in requirements involve the maximum pour point of the two lightest distillate fuel oils (No. 1 and No. 2) which have been lowered from 15° F. to 0° and 10° F., respectively. The viscosities of three heavier oils (Nos. 3, 5, and 6) have also been lowered. The maximum Saybolt Universal viscosity at 100° F. of No. 3 has been lowered from 55 to 45, and the minimum on No. 5 has been lowered from 60 to 50. Likewise, the maximum viscosity, Saybolt Furol at 122° F., on No. 6 has been lowered from 500 to 300.

The requirements are now the same as A.S.T.M. Designation D396-39T. The gist of the requirements is shown in the accompanying tabulation.

DETAILED REQUIREMENTS FOR FUEL OILS[1]

	Grade[2]	Flash point (°F.)		Pour point (°F.)	Water and sediment (per cent)	Carbon residue (per cent)	Ash (per cent)	Distillation temp., °F. 10 per cent point		Distillation temp., °F. 90 per cent point		Distillation temp., °F. End point	Viscosity, seconds Saybolt Universal at 100° F.		Viscosity, seconds Saybolt Furol at 122° F.	
No.	Description of fuel oil—	Min.	Max.	Max.	Max.	Max.	Max.	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Min.
1.	Distillate oil for use in burners requiring a volatile fuel	100 or legal	165	0	Trace	0.05 on 10 per cent residuum[4]	..	410	...	...	...	[5]560	...	...	...	...
2.	Distillate oil for use in burners requiring a moderately volatile fuel	110 or legal	190	[3]10	0.05	0.25 on 10 per cent residuum[4]	..	440	600	...	...	...	...	...	...	...
3.	Distillate oil for use in burners requiring a low-viscosity fuel	110 or legal	230	[3]20	0.10	0.15 straight	...	...	675	[5]600	...	...	45	...	...	...
5.	Oil for use in burners requiring a medium-viscosity fuel	130 or legal	...	...	1.00	...	0.10	...	...	...	...	...	...	50	40	...
6.	Oil for use in burners equipped with preheaters permitting a high-viscosity fuel	150	...	...	[6]2.00	...	...	...	...	...	...	...	...	...	300	45

[1]Recognizing the necessity for low-sulfur fuel oils used in connection with heat-treatment, nonferrous metal, glass and ceramic furnaces and other special uses, a sulfur requirement may be specified in accordance with the following table:

Grade of fuel oil—	Sulfur, max., per cent
No. 1	0.5
No. 2	0.5
No. 3	0.75
No. 5	No limit
No. 6	No limit

Other sulfur limits may be specified only by mutual agreement between the buyer and the seller.

[2]It is the intent of these classifications that failure to meet any requirement of a given grade does not automatically place an oil in the next lower grade unless in fact it meets all requirements of the lower grade.

[3]Lower or higher pour points may be specified whenever required by conditions of storage or use. However, these specifications shall not require a pour point lower than 0° F. under any conditions.

[4]For use in other than sleeve-type blue-flame burners carbon residue on 10 per cent residuum may be increased to a maximum of 0.12 per cent. This limit may be specified by mutual agreement between the buyer and seller.

[5]The maximum end point may be increased to 500° F. when used in burners other than sleeve-type blue-flame burners.

[6]To meet certain burner requirements the carbon-residue limit may be reduced to 0.15 per cent on 10 per cent residuum.

[7]The minimum distillation temperature of 600° F. for 90 per cent may be waived if A.P.I. gravity is 26 or lower.

[8]Water by distillation, plus sediment by extraction. Sum, maximum 2.0 per cent. The maximum sediment by extraction shall not exceed 0.50 per cent. A deduction in quantity shall be made for all water and sediment in excess of 1.0 per cent.

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FIELD OPERATIONS

Summarizing the Week's Developments

ILLINOIS—Three pools were opened last week, one each in Coles, Wabash and Jasper counties. The Clinton County side of the Centralia field yielded a number of large wells ranging up to 9,660 bbl. a day in potential output. Production of Centralia increased to over 40,000 bbl. per day and Salem's production and that of the whole state made a substantial increase.

TEXAS: Gulf Coast—A pool was opened in Tertiary Wilcox sand in Colorado County by a 237-bbl. well. A distillate pool was in prospect in the Liverpool area in Brazoria County. The Lolita field in Jackson County was extended.

Southwest Texas—Victoria County has a new pool southwest of the Cologne field and a prospective pool is indicated in Jim Wells County, 5 miles southeast of Sandia. Three miles southwest of the Fitzsimmons pool in Duval County and 5 miles southeast of the Barbacoas field in Starr County are promising prospects.

West Texas—Six wildcats are active in northern Mitchell County, south of the Ira field of Scurry County. One of these is testing Ira pay and indicating a field discovery.

North Texas—The staking of six wildcat locations in Montague County, together with indications of a new Ellenburger lime field discovery in western Wichita County, led the news of the week.

East Texas—A 7,500-ft. wildcat test was staked in Anderson County, the drilling of which must start before July 30, and a new deep Trinity test was staked for the old Woodbine producing Mexia field in Limestone County.

SOUTHEAST NEW MEXICO—De Baca County in eastern New Mexico is scheduled for a drilling program. A shallow test has already been started, the first of several which will attempt to determine the limits of the Buchana dome, believed to lie mainly in Section 34-2n-21e. A deep test is planned.

KANSAS—The first oil discovery in the Kansas sector of the Forest City basin, in Jefferson County, pumped 70 bbl. of oil in 12 hours, and testing continued. The Stoltenberg area, Ellsworth County, was extended 1¼ miles northwestward. The Brandt pool in Butler County was extended ½ mile westward.

OKLAHOMA—Pools were opened in northeastern Noble County and in Section 1-16n-9e in Creek County. A drill-stem test in a wildcat in Section 26-5n-6e, Pontotoc County, indicated the discovery of a gas field.

LA-ARK-TEX—A late bulletin from Atlantic Refining Co.'s No. 1 Bodcaw in Columbia County, Arkansas, announced it had penetrated saturated and porous Smackover lime at 9,122-9,221 ft. In southern Louisiana the Paradis field in St. Charles Parish was extended 1,300 ft. westerly. The Paradis structure is considered one of the largest in coastal Louisiana. A new sand is being tested in the Cameron Meadows field in Cameron Parish.

Completions in All Fields

(Week Ended June 1, 1940)

	Oil	Gas	Dry	Total	1940 total comp. to date	1939 total comp. to date
N. Y., Pa., and W. Va.	62	9	2	73	1,647	1,277
Ohio	11	3	7	21	436	380
Indiana	4	3	5	12	151	75
Kentucky	3	1	4	8	185	263
Illinois	85	0	18	103	1,472	1,416
Michigan	19	2	10	31	546	540
Kansas	28	0	3	31	641	472
Oklahoma	13	2	11	26	741	763
Texas:						
North Central Texas	29	0	14	43	1,349	997
West Texas	31	0	2	33	934	796
Texas Panhandle	8	1	0	9	252	160
East Texas	4	0	0	4	121	225
East Central Texas	0	1	1	2	110	108
East Texas Border	0	1	0	1	25	30
Gulf Coast Texas	15	0	3	18	556	587
Southwest Texas	26	0	12	38	969	1,023
Total Texas	113	3	32	148	4,316	3,926
North Louisiana	6	2	3	11	249	230
Gulf Coast Louisiana	17	0	4	21	389	233
Total Louisiana	23	2	7	32	638	463
Arkansas	3	0	1	4	89	102
Montana	3	0	0	3	67	55
Wyoming	1	0	0	1	63	41
Colorado	0	0	0	0	7	4
New Mexico	5	0	1	6	292	251
California	21	0	4	25	475	397
Total United States	394	25	105	524	11,766	10,425
Total previous week	407	34	101	542		
Week ended June 3, 1939	393	46	147	586		

Outstanding Fields—Highlights

(Week Ended June 1, 1940)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	35	50	7	4,969	1,370	49,550
Hull-Silk	20	61	8	4,621	261	6,898
Wasson	17	47	8	9,871	826	32,648
Ector County	21	70	15	10,288	2,139	52,040
Jones County	8	20	1	150	623	8,000
East Texas	8	14	4	220	25,991	396,591
OKLAHOMA						
St. Louis	3	15	0	0	882	29,000
Cement	2	17	0	0	307	7,150
KANSAS						
Bemis	0	8	3	700	318	7,250
Burnett	2	11	3	1,194	94	5,500
Silica	1	11	2	264	630	11,450
Trapp	3	14	3	769	531	11,550
NEW MEXICO						
Lea County	15	41	3	1,954	2,472	87,750
Eddy County	9	69	2	1,600	569	19,250
LA-ARK-TEX						
Cotton Valley, La. (deep)	1	2	1	480	161	15,500
Oila, La.	1	6	0	0	9	1,460
Golden Meadow, La.	1	16	1	113	84	12,800
MICHIGAN						
Allegan County	4	28	4	938	485	8,342
Kent County	4	18	4	238	313	14,797
CALIFORNIA						
Montebello	0	14	0	0	358	22,650
ILLINOIS						
Salem	32	113	25	28,455	1,997	248,345
Centralia	11	67	29	30,081	688	40,836
Louden	7	30	15	3,419	1,479	74,206
Other basin fields	31	226	16	4,887	2,087	75,625
Old fields	....	.....	....	.....	.....	11,418
MISSISSIPPI						
Tinsley	0	6	2	615	55	8,032

Illinois, Indiana and Kentucky

By STAFF CORRESPONDENT

Output of Centralia and Salem Rises; State Has 3 New Pools

CENTRALIA, Ill., June 3.—The Gulf Refining Co. found it necessary to loop its 9-mile pipe line from the Centralia field to the Gulf Pipe Line Co.'s trunk line in order to take care of the large production from its leases in the Clinton County side of the Centralia field. The Gulf company does not run any oil but that from its own leases, and even this became too great for the original branch line to handle. In the past week the company completed No. 17 South Buehler, SE SW Section 1-1n-1w for an initial production of 5,567 bbl. and No. 1 Community-Buehler in NW SW Section 1-1n-1w for 658 bbl. in 3 hours, and later 3,710 bbl. in 9 hours, or at the rate of more than 9,600 bbl. a day. These wells produce from Devonian lime and the company has a dozen wells drilling in Sections 1, 2, and 12, of which much is expected.

Shell Oil Co., Inc., also has some choice leases in this prolific part of the Centralia field and in the past week the company's No. 8-C Buehler, SW SE SW Section 1-1n-1w, started with a production of 5,105 bbl. per day and No. 6-C Hanseman, W½ NW SE Section 11-1n-1w, was completed for 3,021 bbl. in 24 hours.

Twenty-nine wells were completed in the Centralia field in the past week and their initial production was 30,081 bbl. All the production came from Devonian lime.

A total of 85 oil wells were completed in the state during the week, Salem contributing 25 with a combined initial of 28,455 bbl. Seventeen of the 25 wells were Devonian producers with an initial of 23,073 bbl. and eight were from upper pays with a total of 5,382 bbl. in first-day output. Fifteen wells completed in the Louden field produced 3,419 bbl. initially. Eighteen dry holes were drilled in the state including three Centralia outposts in the east, or Marion County, side of the field; two each in White, Effingham, Clinton, and Wayne counties, and 1 each in Wabash, Pike, Clay, McDonough, Marion, Edwards, and Washington counties. No new gas wells were reported.

Three New Pools in 1 Week

Three new pools were opened in the past week in Jasper, Wabash and Coles counties. Pure Oil Co.'s No. 1 M. Aldridge, in Section 17-5n-10e, Jasper County, 3 miles from other production, was estimated to be good for around 2,000 bbl. per day from McClosky lime, total depth 2,850 ft. Carter Oil Co.'s No. 1-A Seaman, 2 miles south of Mattoon, in the SE NE SW Section 35-12n-7e, Coles County, was reported flowing 240 bbl. a day from oolitic lime at 2,002-18 ft. No. 1 Seaman on the same lease was drilled through the St. Peter sand and was a failure in that formation. It was plugged back and upper horizons tested but hole trouble caused its abandonment. Two and one-half miles northwest of the Keensburg pool, and in SE SE SE Section 27-1s-13w, Wabash County, a pool was opened by Burr Lambert's No. 1 Seiler, which was reported to have flowed 24 bbl. per hour from the McClosky lime at a total depth of 2,626 ft. It had not been acidized. This well also had good saturation in the Benoist sand but the owner decided to pass it up and test the deeper pay.

Daily average production of Illinois fields in the week ended June 1 was 450,430 bbl. a day, an increase of 16,698 bbl. per day over the production of the week before. Both Salem and Centralia increased their output, Salem to 248,345 bbl., a 7,361-bbl. increase; Centralia to 40,836 bbl., an increase of 9,700 bbl. Louden's production was 74,206 bbl., a decrease of 3,008 bbl. Other basin fields produced 75,625 bbl., an increase of 2,211 bbl. The old fields of the state produced 11,418 bbl. per day, an increase of 434 bbl.

Centralia Field

Fairhope's No. 3 Allison, 1,129 ft. from south and 868 ft. from west lines of NE Section 12-1n-1w, pay at 2,907-14 ft., 3,500 gal. of acid, flowed 816 bbl. Stoker and others' No. 1 Southern R.R., NW cor. NE SE Section 12, pay at 2,908-19 ft., 2,000 gal. of acid, flowed 969 bbl. Hughes Petroleum Corp.'s No. 1 Hurst, NW cor. NE SE NE Section 13, total depth 2,912 ft., 1,500 gal. of acid, flowed 102 bbl. Samedan Oil Co.'s No. 3 A. Buehler, C E½ NE SW Section 1, pay at 2,869-82 ft., 3,000 gal. of acid, flowed 2,160 bbl. Gulf Refining Co.'s No. 17 south Buehler, C E½ SE SW Section 1, pay at 2,906-20 ft., 3,000 gal. of acid, flowed 5,567 bbl. and 2,000,000 cu. ft. of gas. Shell Oil Co., Inc.'s No. 8-C Buehler, SW SE SW Section 1-1n-1w, pay at 2,894-2,910 ft., 3,000 gal. of acid, flowed 5,105 bbl. Shell's No. 6-C Hausemann, C W½ SW SE Section 1-1n-1w, pay at 2,910-21 ft., 3,000 gal. of acid, flowed 3,021 bbl Smoky Oil Co.'s No. 5 Allison, SW SW NE Section 12, pay at 2,912-24 ft., 3,000 gal. of acid, flowed 2,032 bbl. Simmel's No. 2 Kaelin, SW cor. SE Section 12-1n-1w, pay at 2,916-29 ft., 2,000 gal. of acid and shot with 30 qt. of nitroglycerin, flowed 130 bbl., with some water.

In the Marion County side of the Centralia field, Scott & Carey completed a dry hole, No. 1 Grosch, SW SE NW Section 18-1n-1e. It had Devonian lime pay at 2,917-27 ft. The hole filled with oil but after a 750-gal. acid treatment bailed water and a showing of oil, and was abandoned. Three States Oil Co.'s No. 1 Ruth Cade, in Lot 6, Block 10, old town (in SE NW NW Section 18-1n-1e), was temporarily abandoned at 2,972½ ft. It had Devonian pay at 2,928-37 ft., but after a 750-gal. acid treatment swabbed 80 bbl. of the 120-bbl. oil load, and then "went dead." Three States Oil Co.'s No. 1 Shrader, Lot 3, Block 4, old town (in SE NW NW Section 18), pay at 2,915-42 ft., acidized with 750 gal., flowed a few heads and then quit. It was also capped and temporarily abandoned.

Gulf Refining Co.'s No. 1 Buehler, E½ NW SW Section 1-1n-1w, total depth 2,900 ft. (plugged back from 2,956 ft.), acidized with 3,000 gal., flowed 658 bbl. in 3 hours. Not completed.

W. C. McBride, Inc.'s No. 10 Allison, NW SE NE Section 12-1n-1w, Devonian pay at 1,915-29 ft., 3,000 gal. of acid, 1,275 bbl. L. E. Simmel's No. 3 Kaelin estate, NW cor. SW SE Section 12, pay at 2,907-18 ft., 1,000 gal. of acid, flowed 121 bbl. Fairhope's No. 2 Feldman, NW cor. NE SE SW Section 12, 1,227 bbl. the first 24 hours, showed a little water on second day. Smoky Oil Co.'s No. 4 Allison, C W½ NW SE Section 12, pay at 2,908-23 ft., 3,000 gal. of acid, flowed 650 bbl. Smoky Oil Co.'s No. 2 Allison, SE cor. NW SE Section 12, pay at 2,902-14 ft., 3,000 gal. of acid, 200 bbl.

Fairhope's No. 2 Allison, NE cor. SW NE Section 12, pay at 2,914-18½ ft., 3,000 gal. of acid, 950 bbl. Fairhope's No. 3 Barth, SW cor. NE SE SW Section 12, pay at 2,916-26½ ft., 1,500 gal. of acid, 336 bbl. B. Fields' No. 2 Allison, SW cor. NE NE Section 12, pay at 2,919-25 ft., 1,000 gal. of acid, flowed 896 bbl. B. Fields' No. 1 Allison, NW cor. NE NE Section 12, pay at 2,917-23 ft., 1,000 gal. of acid, flowed 769 bbl. T. W. Lee's No. 1 Hansemann, SW cor. SE SW SE Section 1-1n-1w, pay at 2,913-16 ft., 1,000 gal. of acid, 1,081 bbl. the first 24 hours; reacidized with 1,000 gal., flowed 730 bbl. in 24 hours.

Thompson Drilling Co.'s No. 3 Hansemann, SW cor. SE NW NE Section 12, pay at 2,909-24½ ft., 3,000 gal. of acid, 1,080 bbl. Thompson Drilling Co.'s No. 4 O. Hansemann, SE cor. NW NE Section 12-1n-1w, pay at 2,909-20 ft., 2,000 gal. of acid, pumped 960 bbl. Thompson Drilling Co.'s No. 3 O. Hansemann, NE cor. NW NE Section 12, pay at 2,909-20 ft., 3,000 gal. of acid, 720 bbl. Ring's No. 1 Lloyd, SW NE SE Section 12, pay at 2,900-11 ft., 1,000 gal. of acid, pumped and flowed 280 bbl., 5 per cent water. Ring & McLean's No. 1 F. Hansemann, SW SE SE Section 1, pay at 2,906-12 ft., 1,000 gal., flowed 735 bbl. Penn's No. 1 Ohl, NE NE SE Section 12, pay at 2,917-25 ft., 750 gal. of acid, flowed 240 bbl. C. Kenyon's No. 1 Knoth, NE NE SE Section 12, pay at 2,907-18 ft., pumped 214 bbl. without an acid treatment. A. W. Gerson's No. 1 fee, NW NE NE Section 24-1n-1w, pay at 2,930-35 ft., flowed 360 bbl. naturally.

E. Frank Jones' No. 1 Heed, NW cor. SW SW Section 7 1n-1e, on the Marion County side of the field, pay at 2,918-22 ft., 1,000 gal. of acid, pumped 350 bbl.

Paul Doran's No. 3 Rothmeyer, SE SE SE Section 13-1n-1w, pay at 2,905-17 ft., 2,000 gal. of acid, flowed 399 bbl. Carl Ewing's No. 1 Kohl heirs, NE NE SE Section 12, pay at 2,908-18 ft., 1,000 gal. of acid, pumped 190 bbl. A. F. Anding's No. 1 Siegler, NE cor. Section 13, 750 gal. of acid, flowed 310 bbl., 10 per cent water. Scott & Carey's No. 1 Starr, SW cor. NW NE SE Section 12, pay at 2,900-12 ft., 750 gal. of acid, 250 bbl.

Oil Producers, Inc.'s No. 1 Marshall, NE cor. SW SW Section 18-1n-1e, on the Marion County side of the field, pay at 2,898-2,904 ft., 2,000 gal. of acid, flowed 258 bbl. through ½-in. choke. W. B. James' No. 1 Neimeier, SW cor. NW Section 18-1n-1e, pay at 2,904-10 ft. and 2,921-27 ft., 2,000 gal. of acid, pumped 360 bbl. of oil and 36 bbl. of water.

Gulf Refining Co.'s No. 17 south Buehler, C E½ SE SW Section 1-1n-1w, flowed 1,064 bbl. in 4 hours through casing and tubing; still testing, total depth 2,920 ft.

Algona Oil Co.'s No. 4 Marshall, NE SE SW Section 12, total depth, given a 3,000-gal. acid treatment; made one flow and "went dead"; swabbing.

Ales and others' No. 2 Hicks, SW NE SE Section 12, a Trenton lime test, drilling at 3,959 ft., with no showing. Trenton top 3,920 ft. on drillers' log.

In Clark County H. R. Hull's No. 1 Briscoe, CWL SW Section 32-12n-14w, pay at 400-35 ft., in Westfield lime, 2,000 gal. of acid, 3 bbl. per day, on the pump. Allen and others' No. 1 Morgan, NW cor. NE Section 31-10n-13w, best pay 471-79 ft., shot with 20 qt., pumped 27 bbl., with some water.

In Effingham County E. E. Goad and others' No. 1 Henry, NE NE NE Section 31-9n-4e, Bethel sand at 1,698 ft., total depth 1,714 ft., dry and abandoned. Clow and others' No. 1 Johnson, NW NE SE Section 17-8n-4e, Paint Creek sand at 1,730-63 ft., total depth 1,772 ft., dry and abandoned.

Louden Field

In the Louden field in Fayette County, Carter Oil Co.'s No. 2 I. Brooks, SW NW SE Section 23-8n-3e, Cypress stray at 1,432-43 ft., and Cypress sand at 1,458-1,511 ft., shot with 70 qt., pumped 204 bbl. Carter's No. 1 Grames, SW NW NW Section 24-8n-3e, Cypress sand at 1,521-54 ft., shot with 15 qt., pumped 194 bbl. Carter's No. 3 Mary Dunaway, SW NE SE Section 29-8n-3e, Bethel sand at 1,488-1,501 ft., not shot, pumped 100 bbl. of oil and 145 bbl. of water. Carter's No. 4 State Bank, NW NE SW Section 10-8n-3e, shot with 10 qt. at 1,599-1,602 ft., and with 40 qt. at 1,511-27 ft., pumped 414 bbl. from Cypress and Paint Creek sands. Carter's No. 5 Mae Taylor, NE SE NW Section 12-8n-3e, shot with 20 qt., in Cypress sand at 1,448-74 ft., pumped 138 bbl. Carter's No. 1 Tipsword, NW SW NE Section 13-8n-3e, shot with 40 qt. at 1,487-1,501 ft., Cypress sand, pumped 678 bbl. Carter's No. 4 C. Cline, NE NE SE Section 14-8n-3e, Cypress sand at 1,500-32 ft., shot with 40 qt., pumped 192 bbl. Carter's No. 2 C. McCollum, NW NE SW Section 2-8n-3e, shot with 60 qt. at 1,494-1,513 ft., Cypress sand; pumped 546 bbl. Carter's No. 2 Emma Hogge, NE NW SW Section 1-8n-3e, shot with 30 qt. in Cypress sand at 1,508-35 ft., pumped 252 bbl. Carter's No. 3 E. Owen, SE NE NW Section 17-7n-3e, shot with 120 qt. at 1,492-1,540 ft., Cypress sand, pumped 48 bbl. Gibson & Jennings' No. 3 McDonald, SE NE SE Section 13-7n-2e, Cypress sand at 1,561-65 ft., shot with 60 qt., pumped 65 bbl. of oil and 1 bbl. of

water. Blalock & Walters' No. 2 Sealock, NE NE NE Section 24-7n-2e, shot with 15 qt., pumped 61 bbl. from Cypress sand at 1,556-68 ft. Zephyr Oil Co.'s No. 6 Smith, 330 ft. from south and 1,105 ft. from west lines of SW Section 31-6n-3e, Cypress sand at 1,600-15 ft., shot with 15 qt., pumped 240 bbl. Texas Co.'s No. 6 E. G. McKee, NE SE NW Section 6-6n-3e, Cypress at 1,546-64 ft., shot with 10 qt., pumped 147 bbl. Texas' No. 7 Wright, NE cor. NW SW Section 31-6n-3e, Cypress at 1,585-1,601 ft., shot with 8 qt., pumped 140 bbl.

Salem Field

In the Salem field in Marion County, Magnolia Petroleum Co.'s No. 47 W. O. Chitwood, SW NW SW Section 16-2n-2e, Devonian lime pay at 3,525-31 ft., 1,000 gal. of acid, flowed 724 bbl. Texas Co.'s No. 30 E. Jett, NW SW SW Section 16-2n-2e, Devonian pay at 3,478-3,512 ft., acidized with 5,000 gal., flowed 650 bbl. Texas' No. 31 Jett, NW SE SW Section 16-2n-2e, pay at 3,486-3,520 ft., 5,000 gal. of acid, flowed 1,554 bbl. in 12 hours. Texas Co.'s No. 15 W. Martin, NE SE SE Section 17-2n-2e, pay at 3,472-3,500 ft., 5,000 gal. of acid, flowed 600 bbl. Ohio Oil Co.'s No. 47 M. Young heirs, NE SW SW Section 20-2n-2e, pay at 3,475-3,504 ft., 5,000 gal. of acid, flowed 1,442 bbl. Ohio's No. 48 Young heirs, SW SW SW Section 20-2n-2e, pay at 3,474-3,505 ft., 4,000 gal. of acid, flowed 259 bbl. Magnolia Petroleum Co.'s No. 107 J. H. Young, SE cor. SW SE NW Section 28-2n-2e, pay at 3,454-92 ft., 4,000 gal. of acid, flowed 795 bbl. Ohio Oil Co.'s No. 30 Lloyd, SW NW SE Section 28-2n-2e, pay at 3,459-87 ft., 3,000 gal. of acid, flowed 2,436 bbl. Texas Co.'s No. 24 J. Chapman, SW NE SW Section 28-2n-2e, pay at 3,438-70 ft., 5,000 gal. of acid, flowed 334 bbl. in 18 hours. Texas Co.'s No. 15 L. Dunning, SW SE SE Section 30-2n-2e, pay at 3,354-3,404 ft., 3,000 gal. of acid, flowed 1,105 bbl. Texas' No. 16 J. Canull, NE SW SE Section 31-2n-2e, pay at 3,308-50 ft., 5,000 gal. of acid, flowed 2,969 bbl. Texas' No. 16 L. Dunning, SE NW SE Section 31-2n-2e, pay at 3,307-40 ft., 3,000 gal. of acid, flowed 1,296 bbl. Texas' No. 31 K. Wayman, NW NE NE Section 31-2n-2e, pay at 3,352-90 ft., 5,000 gal. of acid, flowed 1,240 bbl. Texas' No. 18 M. Williams, SE NE SE Section 31-2n-2e, pay at 3,296-3,338 ft., 3,000 gal. of acid, flowed 1,963 bbl. Texas' No. 9 Hopkins, NW NW SW Section 32-2n-2e, pay at 3,303-40 ft., 3,000 gal. of acid, flowed 1,905 bbl. Texas' No. 7 J. McConnaghay-B, NE SE SE Section 32-2n-2e, pay at 3,464-3,505 ft., 5,000 gal. of acid, flowed 1,930 bbl. Texas' No. 16 Stonecipher, C N½ SW SE Section 32-2n-2e, pay topped at 3,418 ft., acidized with 5,000 gal., flowed 2,336 bbl. Texas' No. 6 Lazaretti, NW SW SW Section 33-2n-2e, pay at 3,469-3,510 ft., 5,000 gal. of acid, flowed 1,440 bbl. Texas' No. 3 C. Lee, C N½ SW SE Section 33-2n-2e, McClosky lime at 2,084-95 ft., 3,000 gal. of acid, pumped 119 bbl. Texas' No. 8 Shanafelt, SW SW SE Section 9-2n-2e, McClosky lime at 2,081-2,103 ft., pumped 118 bbl. a day, without an acid treatment.

In the south end of the Salem field, Texas Co.'s No. 51 Centralia lands, SW SW NW Section 4-1n-2e, shot with 65 qt. in Benoist and Aux Vases sands at 1,807-77 ft., flowed 918 bbl. in 20 hours. Ohio Oil Co.'s No. 16 R. L. Murray, SE SW SE Section 7-1n-2e, McClosky lime pays from 2,036 ft. to 2,095 ft., at intervals, 3,000 gal. of acid, flowed 840 bbl. Texas Co.'s No. 8 W. Carr-A, C N½ SW NW Section 8-1n-2e, McClosky lime at intervals from 1,953 ft. to 2,050 ft., 3,000 gal. of acid, flowed 1,370 bbl. Texas' No. 7 W. Carr-C, C S½ NW NW Section 8-1n-2e, McClosky lime at 1,948-2,007 ft., at intervals, 3,000 gal. of acid, flowed 880 bbl. in 12 hours. Texas' No. 8 Carr-C, NW cor. SW NE NW Section 8-1n-2e, McClosky lime at 1,950-60 ft. and 1,998-2,010 ft., 3,000 gal. of acid, flowed 1,029 bbl. Texas' No. 14 R. Fyke, SE SE SW Section 8-1n-2e, McClosky lime at 2,066-86 ft., 3,000 gal. of acid, pumped 108 bbl.

In Wabash County Big Chief Drilling Co.'s No. 2 Peach, SE SW SW Section 34-2n-13w, acidized with 4,000 gal. in McClosky lime at 2,682-2,719 ft., pumped 722 bbl. Pollock's No. 1 Cisel, NE NW SE Section 2-1n-12w, dry and abandoned in Cypress sand at 1,925-50 ft., Tide Water Associated Oil Co.'s No. 7 Gier, SE SW NE Section 17-2s-13w, total depth 2,431 ft., plugged back and shot Biehl sand at 1,775-85 ft., with 10 qt., swabbed 4 bbl. in 24 hours. Longhorn Oil Co.'s No. 7 Heil, NW cor. of extended NW Section 18-3s-13w, Cypress sand at 2,477-2,500 ft., swabbed 130 bbl. after a 30-qt. shot.

White County

Sun Oil Co.'s No. 1 Clarence Brown, C S½ SE NW Section 2-4s-9e, McClosky lime at 3,371 ft., flowed 631 bbl. in 18 hours. Paul L. Miller's No. 1 Ford heirs, SE SW NW Section 22-4s-14w, dry and abandoned at 3,004 ft., McClosky lime top at 2,929 ft. D. & H. Drilling Co.'s No. 1 Hon, SW NW NE Section 9-4s-14w, dry and abandoned in Benoist sand at 2,723-45 ft.

In the Storms pool Eason's No. 2 Storms A, SW SW SE Section 11-6s-9e, Waltersburg sand at 2,263-83 ft., flowed 208 bbl. of oil in 12 hours.

In Hamilton County Ohio Oil Co.'s No. 1 Wilson, SW SW NE Section 6-6s-7e, shot with 40 qt. in Cypress sand at 2,687-2,710 ft., pumped 524 bbl. per day.

In Pike County George Brainerd's No. 1 Allison, SW SW NW Section 11-7s-3w of fourth principal meridian, dry and abandoned in St. Peter sand at 750 ft.

In Clinton County O. W. Burroughs' No. 3 Knolhoff, NW cor. NE SW SE Section 2-1n-2w, dry and abandoned at 1,363 ft. In the Bartelso field Paul Mosebach's No. 2 B. Maddox, NE SW SW Section 4-1n-3w, Devonian lime at 2,403-40 ft., 3,000 gal. of acid, flowed 450 bbl. Mosebach's No. 3 Robben, NW SW SE Section 5-1n-3w, Devonian lime at 2,420-42 ft., 2,500 gal. of acid, swabbed 450 bbl. Newton & Ward's No. 1 Dee, NE NE NW Section 8-1n-3w, Devonian at 2,384 ft., best pay at 2,428-33 ft., 4,000 gal. of acid, flowed 425 bbl.

In Wayne County H. H. Weinert, Inc.'s No. 3 Muhlbach, C S½ SW NW Section 34-1s-7e, McClosky at 3,264-74 ft., flowed 468 bbl., naturally, in 24 hours. Texas Co.'s No. 2 Clark, NW SE SE Section 4-2s-7e, McClosky pay acidized at 3,217-42 ft. with 3,000 gal., flowed 280 bbl. in 7 hours. Dome Oil & Gas Co.'s No. 1 Harris, NW NW SE Section 34-2s-8e, dry and abandoned at 3,878 ft. Salem lime was topped at 3,840 ft. Southern Petroleum Corp.'s No. 1 Vaught, C W½ SW NE Section 9-3s-9e, dry and abandoned at 3,427 ft., McClosky lime lay at 3,383-96 ft. Jarvis Brothers' No. 1 Barbare, NW NE NE Section 33-3s-9e, White County, treated with 9,700 gal. of acid through perforations at 3,372-98 ft., intervals from 3,372 ft. to 3,439 ft., 202 shots, pumped 65 bbl. of oil and 50 bbl. of water. Baldwin's No. 2 Danby, SE NW SE Section 31-3s-8e, McClosky lime at 3,351-56 ft., shot with 30 qt., pumped 80 bbl.

In Clinton County W. S. Tatum's No. 1 Voss, C SW NE Section 15-2n-4w, Devonian lime at 2,315 ft., Silurian at 2,427 ft., total depth 2,440 ft., dry and abandoned.

In Clay County

Benedum-Trees, Inc.'s No. 1 Hagan, NW SE NE Section 28-4n-7e, a wildcat in Clay County, was abandoned at 3,105 ft. It got sulfur water at 3,102-05 ft. Fredonia lime was topped at 2,992 ft. Pure Oil Co.'s No. 3 C. O. Schofield, C E½ NW SW Section 33-2n-8e, Enterprise pool, McClosky pay at 3,024-32 ft., acidized with 5,000 gal., flowed 159 bbl.

In Richland County Pure Oil Co.'s No. 2 Snider, C W½ SW NE Section 6-4n-10e, Dundas pool, McClosky lime at 2,856-64 ft., flowed 278 bbl., naturally.

In McDonough County Charles Measley's No. 1 Cummings, NE cor. NW NE NE Section 21-4n-4w of the fourth principal meridian, Niagara lime top at 440 ft., total depth 470 ft., shot with 100 lb. of dynamite, pumped ¼ bbl. of oil and some water; plugged and abandoned.

In Marion County Max Pray's No. 1 Thurman, SW SE SW Section 15-3n-2e, Ste. Genevieve lime at 2,255 ft., total depth 2,315 ft., no show of oil; abandoned.

In Edwards County Tide Water Associated Oil Co.'s No. 1 Bunting, SE SE NW Section 21-1s-10e, dry and abandoned at 3,410½ ft. St. Louis lime was topped at 3,357 ft. Jarvis Brothers' No. 2 Wicks, C S½ SE NE Section 24-2s-10e, McClosky lime at 3,107-25 ft., flowed 128 bbl. through ½-in. choke. It had not been acidized.

In Washington County Magnolia Petroleum Co.'s No 6 J. Novak, SE NW SW Section 14-3s-3w, Benoist sand at 1,238-48 ft., pumped 24 bbl. Magnolia's No. 4 McConnell, SE SE NW Section 15-3s-3w, dry and abandoned in Benoist sand at 1,292-1,313 ft.

New Wildcat Operations

In Clark County B. B. Hartman's No. 1 Fain, 206 ft. from south and 174 ft. from east lines of the NE SW Section 25-10n-14w, moving in machine.

In Fayette County C. P. Pollard's No. 1 A. Morrow, SW SE SE Section 7-5n-1w, a Devonian test, spudded.

In Clinton County Thompson Drilling Co.'s No. 1 Knolhoff, 233 ft. from north and west lines of the NW SW Section 11-1n-2w, rigging up standard tools for Benoist test.

In Richland County Carl Robinson and others' No. 1 Al Jenner, C NE NE SE Section 26-2n-10e, cellar.

In Pike County Wooter and others made a location for a St. Peter sand test in C W½ SW NE Section 35-4s-7w of fourth principal meridian.

In White County Bay Oil Co.'s No. 1 Vaupel, 990 ft. from north and 430 ft. from east lines of the NW NW Section 2-4s-9e, moving in material. Sun Oil Co.'s No. 2 Robert Brown, C N½ NE SW Section 2-4s-9e, drilling at 1,165 ft. Magnolia Petroleum Co.'s No. 1 J. E. Lamont, SW NW Section 2-4s-9e, cellar and pits.

In Saline County Potter and others' No. 1 Thaxton, C E½ NW SW Section 28-8s-7e, rig up.

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INDIANA

EVANSVILLE, Ind., June 3.—Completions in five Indiana counties reported in the past week included two oil wells in Gibson County with initial production of 168 bbl. and two in Posey County with initial production of 161 bbl. Decatur County shows a new gas well and Spencer County two gas completions and a third held up by hole trouble. Dry holes were reported from Sullivan, Knox, and Gibson, with one each, and Spencer County, with two failures.

The most important news of the week came from Gulf Refining Co.'s wildcat about 12 miles west and a little north of Evansville. It is No. 1 Lang, in NE NE Section 7-6s-12w, Posey County. The well cored saturation in Mansfield sand at 1,130-60 ft., and a drill-stem test recovered 162 ft. of oil and 412 ft. of mud in 50 minutes. It was drilled to 1,179 ft. and plugged back to 1,126½ ft. and the crew was waiting for cement to set.

Gibson County

In Gibson County W. C. McBride, Inc.'s No. 1 Blair, SE SE NW Section 13-2s-12w, was drilling at 1,000 ft. A. L. Braden and others' No. 1 Knight, NE SW SW Section 2-2s-11w, had Cypress sand at 1,900-15 ft. and shot it with 20 qt. The crew was cleaning out. Midwest's No. 3 Bryant, NW cor. NE Section 15-2s-9w, was shot with 10 qt. at 1,370-80 ft. and made a 10-bbl. initial pumper. It was completed. Obermyer and others' No. 1 Kleiderer, SE SE SE Section 28-3s-14w, had pay at 2,775-95 ft. and pumped 158 bbl. the first day, 165 bbl. the second and 110 bbl. the third day, without a shot. It was completed. Hall Edwards made locations for No. 1 Maier, SE SE SE Section 14-3s-14w; No. 2 Maier, 972 ft. from the south line and 330 ft. from the east line, SE Section 14; No. 3 Maier, 1,632 ft. from the south line and 330 ft. from the east line, SE Section 14; and No. 4 Maier, C NE NE SE Section 14. Papoose Oil Co.'s No. 3 Cooper C, SE NW SW Section 18-3s-13w, was treated with 500 gal. of acid at a total depth of 2,917 ft., and pumped 12 bbl. of oil in 7 hours. It was to be reacidized. A. J. Walker's No. 1 Schmidt, NW NE NW Section 24-3s-9w, was dry and abandoned at 1,765 ft. It had Ste. Genevieve lime top at 1,605 ft. S. M. Kernan's No. 1 Brown, C E½ NW SE Section 12-3s-9w, was drilling at 1,450 ft.

Posey County

In Posey County Continental Oil Co.'s No. 1 Ford, NE NE NW Section 35-3s-14w, had McClosky lime at 2,890-99 ft. It was acidized with 1,000 gal. and pumped 43 bbl. of oil in 9 hours. Acidized again with 2,000 gal., it pumped 51 bbl. in 24 hours. Total depth is 2,942 ft. Another test will be made at 2,807-28 ft. Harry Sandler and others' No. 1 Keck, NE cor. SW NW Section 34-3s-14w, has an oil sand at 2,786-94 ft., and set 5½-in. casing at 2,775 ft. Ray Rodgers and others spudded No. 1 Keck, 100 ft. from the north line and 330 ft. from the west line of SE NW Section 34-3s-14w. Somers & Egan were drilling at 400 ft. in No. 5 Keck, NW NE NE Section 34-3s-14w. Ray Ryan and others made a location for No. 2 Keck, NW NW NW Section 34-3s-14w. Brown, Ryan, and others' No. 1 Spencer, C E½ SE SE Section 26-7s-15w, total depth 2,882 ft., perforated pipe with 18 shots at 2,833-40 ft., but got only a show of water; perforated with 36 shots at 2,732-38 ft. It pumped 150 bbl. of oil in two days. The tubing dropped and unseated the plug. Plug was set again at 2,800 ft. Waiting for cement to set. Sun Oil Co. completed No. 3 Schroeder, SW SE NW Section 1-7s-12w. It was shot with 20 qt. at 1,878-88 ft., and pumped 141 bbl. in 24 hours. Nash Redwine and others completed No. 1 Woods unit, NE SW SW Section 1-7s-12w, in sand at 1,796-1,815 ft., and it pumped 20 bbl. initially, with a trace of water.

Spencer County

In Spencer County Hedges and others' No. 1 Edle, SW NW NW Section 7-7s-7w, was dry and abandoned

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Southwest Texas District

New Pool South of Cologne; Several Favorable Prospects

By F. L. SINGLETON

CORPUS CHRISTI, Tex., June 3.—The opening of a new pool in Victoria County, testing of several prospective pool openers, and the announcement of several interesting wildcat locations featured developments in the Southwest Texas district in the past week.

Colton & Colton's No. 1 Etta Terrell, 2½ miles southwest of the Cologne field, Victoria County, is flowing 5½ bbl. of 40-gravity oil per hour through a ⅞-in. choke, with tubing pressure 500 lb. and shut-in casing pressure 1,100 lb. The well was drilled to 5,284 ft., and 7-in. casing was cemented at 5,275 ft., after a drill-stem test the previous week at 5,264-84 ft., recovered 220 ft. of pipe-line oil. The well is about 13 miles southwest of the town of Victoria, and in the J. Sideck Survey.

Another pool for the Jim Wells County sector of the Frio-Vicksburg trend was indicated as M. M. Miller & Sons' No. 1 T. M. Gallagher tested 49-lb. working pressure and recovered 960 ft. of 39-gravity oil on a 20-minute drill-stem test at 5,191-5,215 ft., total depth. One foot of oil sand was recovered in a core at 5,191-5,200 ft., and 3 ft. of sand was recovered in a core at 5,200-5 ft. An electrical survey showed oil sand at 5,189-93 ft.; shale at 5,193-5,200 ft.; oil sand at 5,200-4, ft. and shale with sand streaks at 5,204-15 ft. Casing is expected to be cemented for a production test. The well is about 5 miles southeast of Sandia in Block 21, J. H. Gallagher subdivision, in the Casa Blanca grant, in the extreme northeast corner of the county.

The Wade City-Orange Grove area, which is already receiving an extensive drilling campaign, was extended by Henshaw Brothers' No. 1 J. F. Wendt, completed through perforated casing at 4,905-10 ft. for an initial production of 168 bbl. per day, flowing through an 11/64-in. choke. The well is in Block 4, Share 7, G. H. Reynolds Survey, about ½ mile southwest of the Wade City field. In the Orange Grove area, H. H. Howell's No. 2 Schrade, cored sand showing oil and gas at 5,079-5,100 ft., and is drilling below 5,200 ft.

In Duval County, and 3 miles southwest of the Fitzsimmons field, Bridwell Oil Co. was drilling plug, preparatory to testing No. 1-A Rogers, which made its appearance as a probable pool opener when 210 ft. of oil was recovered on an 8½-minute drill-stem test at 4,321-25 ft. The hole is bottomed at 4,327 ft., and 5½-in. casing was cemented at 4,321 ft.

Locations for two interesting wildcats in Duval County were announced. Three miles southwest of the Colmena field, Gorman & Yoakum and others staked location for No. 1 Duval County Ranch Co. in the G.C.&S.F.R.R. Survey, Section 193, and 9 miles north of the Driscoll field, Magnolia Petroleum Co. is moving in material for No. 1 Sinclair heirs, in Section 510, in F. C. and C. K. Gravis Survey.

Five miles southeast of the Barbacoas field, Starr County, George R. Boyle and others' No. 1 Carruth looms as a discovery well as it flowed 45-gravity oil and recovered 900 ft. of oil on a 19-minute drill-stem test at 3,482-97 ft. Sand showing oil was cored at 3,481-97 ft., and sand was drilled at 3,497-3,504 ft., where a 26-minute drill-stem test recovered 1,400 ft. of salt water, and 120 ft. of drilling mud. Five and one-half inch casing was cemented on bottom at 3,504 ft. The well is in Share 1-B, Porcion 91-92, of the Carmago jurisdiction in the south central part of the county.

In the northeastern part of the county, 2 miles southwest of the Kelsey field, Sun Oil Co. temporarily abandoned No. 1 Rodriguez, after the well showed a small amount of gas and distillate and a large quantity of salt water on a series of production tests through perforated casing at various intervals above 6,400 ft. Southwest of the Sun field, Sun Oil Co.'s No. 1 Lehr, perforated casing at 4,127-37 ft., and swabbed salt water with a slight show of oil.

In the Rio Grande Valley area, Pure Oil Co. and Sal Vieja Oil Co. were reported cementing liner, preparatory to testing No. 1 Garcia Land & Livestock Co., a wildcat in the Santa Isabell grant, Cameron County. The hole is bottomed at 10,307 ft., and several sands logged by an electrical survey are scheduled to be tested.

Location for another wildcat marine operation 1 mile offshore from the Saxet Heights field and in Nueces Bay, was announced by Humble Oil & Refining Co. The well is No. 1 State, in Tract 723. In the newly opened East Flour Bluff field, locations for several wells are reported to have been made, and drilling is scheduled to be started on one of the locations in the near future.

Richardson Petroleum Co. was awarded 29 drilling sites within the townsite of Robstown by the city council the past week. The award gives the company 580 acres out of 880 acres within the townsite, which was divided up into 44 drilling sites of 20 acres each. The company posted a $200,000 bond, and drilling on the first location is scheduled to be started in the next few weeks. Production was recently extended to the city limits by the completion of Richardson Petroleum Co.'s No. 1 Studer. About 1½ miles east of the field, Texas Conservative Oil Co. is rigging up No. 1 T. H. Isensee in the Gregorio Farias Survey.

In La Salle County, H. R. Cullen's No. 1 Washburn, a projected Tertiary Wilcox project, is being watched with much interest, following a drill-stem test the previous week which indicated 450-lb. working pressure and recovered 150 ft. of gas-cut drilling mud, with a slight showing of oil. Sand with a showing of high-gravity oil was cored at 5,753-64 ft., and tight sand, showing gas, at 4,803-5 ft. The well is drilling ahead and is scheduled to be drilled to 8,500 ft.

In the Bruni field, Webb County, Tide Water Associated Oil Co., and American Liberty Oil Co. are rigging up No. 8 Bruni, a Tertiary Wilcox test located only a short distance from No. 7 Bruni, which blew out from the Wilcox sand several months ago.

Glen Harroun was testing No. 1 Green & Manning, a wildcat in Starr County, which looms as the discovery well of a gas field. The well is bottomed at 2,644 ft., and 5½-in. casing was cemented on bottom after a 12-minute drill-stem test at 2,604-44 ft., indicated 350 lb. of working pressure.

Location for a 10,000-ft. wildcat was announced for Brooks County by West Production Co. on the J. D. Cage lease, about 2½ miles south of Falfurrias, and in the G.C.&S.F. Survey.

Along the Balcones fault-line district, and in Bastrop County, W. C. McGlothlin is reported to be setting casing preparatory to testing No. 1 H. N. Bell. The well topped Austin chalk at 2,770 ft., Georgetown lime at 3,017 ft., and 12 ft. of lime, with an oil showing, was recovered in a core at 3,076-3,100 ft. Lime and shale with a showing of oil was cored at 3,100-1 ft., and an additional showing in the Edwards lime was reported logged at 3,153-54 ft. The well is about 2 miles west of Sayersville, in the Albert Black Survey 35.

SOUTHWEST TEXAS COMPLETIONS IN PROVEN FIELDS

(24-hour gages)

Aransas-San Patricio Counties

McCampbell field: Texas Atlas Petroleum Corp.'s No. 1-12 Conn-Brown, perforated casing 7,141-52 ft., 94 bbl., ⅞-in. choke.

Caldwell County

Dale field: Ralph Ogden's No. 8 Talley, 2,305 ft., 185 bbl., flowing by heads. Luling field: Magnolia Petroleum Co.'s No. 16 McKean, 2,105 ft., 75 bbl. oil and 55 bbl. water, pumping. Salt Flat field: J. E. Dickson's No. 1 Connelly, 2,862 ft., dry and abandoned. Tellmar Oil Corp.'s No. 3 E. R. Fleming, 2,760 ft., dry and abandoned.

Duval County

Cedro Hill field: Humble Oil & Refining Co.'s No. 13-F Duval County Ranch Co., 1,431 ft., 30 bbl. fluid, 12 hours, 25 per cent salt water, pumping. Hoffman field: Magnolia Petroleum Co.'s No. 11 Well, 2,805 ft., dry and abandoned. Magnolia Petroleum Co.'s No. 26 Well, sand 2,673-79 ft., 35 bbl., pumping. Magnolia Petroleum Co.'s No. 27 Well, sand 2,673-83 ft., 31 bbl., pumping. J. P. Nash's No. 1 Sutherland, 2,933 ft., dry and abandoned.

Guadalupe County

Elm Creek field: P. G. Rouse and others' No. 1 Schroeder, 1,650 ft., dry and abandoned.

Jim Hogg County

Colorado field: Humble Oil & Refining Co.'s No. 11 King, 3,061 ft., 241 bbl., ⅝-in. choke. Kelsey field: Humble Oil & Refining Co.'s No. 55 McGill, 4,729 ft., 146 bbl., 9/64-in. choke.

Jim Wells County

Ben Bolt field: Bridwell Oil Co.'s No. 7 Beasley, perforated casing 5,245-54 ft., 80 bbl., 3/32-in. choke. Premont field: H. H. Howell and others' No. 3 Canales, perforated casing 2,344-50 ft., 40 bbl., 90 per cent water, jetting. Wade City field: Esves Oil Co.'s No. 1 Spoetzl, sand 4,810½-14 ft., 105 bbl., 25 per cent salt water, 5/32-in. choke.

Live Oak County

White Creek field: Alvin Brauer's No. 2 Bonham, perforated casing 1,495-1,505 ft., 125 bbl., pumping. Gage Brother's No. 1 Kibbler, 1,600 ft., dry and abandoned.

Nueces County

Agua Dulce field: Gulf Plains Corp.'s No. 3 Elliff, 5,049 ft., 10 bbl. distillate, ¼-in. choke. Clara Driscoll field: Wellington Oil Co.'s No. 1-D Driscoll, perforated casing 5,285-89 ft., 6 bbl. oil and 2 bbl. salt water, ¼-in. choke.

Refugio County

Fagan field; Quintana Petroleum Corp.'s No. 1 Fagan, perforated casing 5,841-43 ft., 57 bbl., plus 85 per cent salt water, ¼-in. choke.

San Patricio County

East White Point field: Sinclair Prairie Oil Co.'s No. 1-977 State, perforated casing 5,622-31 ft., 129 bbl., ⅛-in. choke. Sinclair Prairie Oil Co.'s No. 2 State, perforated casing 5,617-27 ft., 219 bbl., ⅜-in. choke. Midway field: Midway Victory Oil Co.'s No. 1 Floerke, perforated casing 5,329½-31½ ft., 50 bbl., 10 per cent salt water, ⅛-in. choke. Plymouth field: Fred Wood and others' No. 1 Dimmick, perforated casing 5,658-62 ft., 134 bbl., ⅛-in. choke.

Starr County

Ricaby field: H. L. Bass and others' No. 5 Hinojosa, sand 1,280-88 ft., 51 bbl., pumping. Rincon field: W. R. Davis' No. 4-A Slick, perforated casing 4,192-4,205 ft., 316 bbl., ¼-in. choke.

Victoria County

Coleto Creek field: Albert Plummer and others' No. 2-B Terrell, sand 2,810-29 ft., 60 bbl., ⅛-in. choke. East Placedo field: Stanolind Oil & Gas Co.'s No. 10 Vandenberg and Hill, perforated casing, 6,376-79 ft., 88 bbl., ⅛-in. choke.

Webb County

Carolina-Texas field: Carter & Rubsamen's No. 13 Houston Oil Co. of Texas, perforated casing 5,023-33 ft., 10 bbl. distillate, ¼-in. choke. Volpe field: Magnolia Petroleum Co.'s No. 27 Volpe-Benavides, sand 2,451-57 ft., 54 bbl. oil and 50 bbl. salt water, pumping. Magnolia Petroleum Co.'s No. 31 Volpe-Benavides, 2,484 ft., dry and abandoned.

Texas and Louisiana Gulf

By
NEIL WILLIAMS

Eighth Sparta-Wilcox Pool Opened in Colorado County

HOUSTON, Tex., June 3.—Interest in the Gulf Coast district was again shifted to the Tertiary Wilcox trend following the opening of a pool in the Sheridan area, Colorado County. Several wildcats throughout the district had reached critical stages and two loomed as probable pool openers as the result of favorable drill-stem tests.

Shell Oil Corp., Inc.'s No. 1 Plow Realty Co., Sheridan area, Colorado County, flowed 237 bbl. of 35.4-gravity oil per day through a ⅛-in. choke with tubing pressure 1,350 lb. and casing pressure 2,500 lb. The well was drilled to a total depth of 8,337 ft., and final completion was made by perforating casing at 8,135-43 ft. Details as to the sand thickness and tops on important geological markers have not been released by the company.

The discovery is located on a block of several thousand acres centering around the O. K. Winn Survey. It is the eighth field to produce from the Sparta-Wilcox formation. Approximately ½ mile due west of the discovery, the same company's No. 1 Goodrich, H. Heller Survey, is drilling in shale below 1,560 ft.

In the Goodrich area, San Jacinto County, Shell Oil Co., Inc.'s No. 1 Coline, James Rankin Survey, is drilling in shale below 8,403 ft., and no additional showings have been reported. This well made its appearance as a pool opener the previous week when 9 ft. of oil and 9 ft. of salt water were recovered on a drill-stem test at 7,577-90 ft. Another Tertiary Wilcox test being watched with interest is Continental Oil Co.'s No. 1 Bender in the Spring area, Montgomery County. The well was drilled to 11,215 ft. but was plugged back to 10,556 ft. and 9⅝-in. casing cemented at 7,200 ft. The hole will be sidetracked due to mechanical trouble.

Dick Schwab's No. 1 Nona Fletcher Lumber Co., about 1 mile east of the Spurger gas area, Tyler County, is drilling in salt-water sand at 4,699 ft. Salt-water sand in the upper Cockfield formation was cored at 4,593 ft., and in the lower formation at 4,678 ft. The well is drilling ahead in search of Tertiary Wilcox production.

Rowan & Nichols Oil Co.'s No. 1 Hubbard showed promise of opening distillate production in the Liverpool area, Brazoria County, as the result of a 10-minute drill-stem test at 9,107-34 ft., which recovered 128 ft. of mud and distillate, and built up working pressure to 550 lb. The well is drilling below 9,174 ft.

In the Blessing area, Matagorda County, Texas Co.'s No. 1 A. P. Pierce, topped shaly sand with a distillate odor at 7,919 ft., and on a 7-minute drill-stem test at 7,914-31 ft., 200 ft. of distillate and 400 ft. of distillate-cut drilling mud and some water was recovered. Working pressure built up to 300 lb. The well is drilling in search of a deeper sand. Location is in the H.&G.N. Survey about 1½ mile southwest of Blessing.

In the same county and in the Wilson Creek field, Barnsdall Oil Co.'s No. 1 Stoddard, attempted to blow out while drilling at 10,298 ft., and the drill pipe became stuck. The well is in the G. B. M. Cotton Survey, about 1½ mile northwest of United North & South Development Co.'s No. 1-A Stoddard, a distillate producer.

Barnsdall Oil Co.'s No. 1 Lazarus, which extended the Lolita field in Jackson County about 1½ miles west earlier in the week, has been killed due to increasing gas pressures, and the well will be recompleted through a new set of perforations. It was originally completed through perforated casing at 5,924-29 ft., and in 9 hours flowed 48 bbl. of fluid, 50 per cent oil, 50 per cent wash water, through a ¼-in. choke. Tubing pressure was 1,925 lb. and casing pressure 925 lb. The Marginulina was topped at 5,284 ft. and the Frio formation at 5,347 ft.

Wellington Oil Co.'s No. 1 L. Ranch, the discovery well of the field, flowed 112 bbl. of oil in an 8-hour potential test flowing through a ¾-in. choke with tubing pressure 900 lb. and casing pressure 1,175 lb. At a hearing before the Texas Railroad Commission Wellington Oil Co. requested that the field be developed on a pattern of 1 well to 20 acres, and recommended straight acreage proration with a tolerance of 10 acres for the final well on a tract. The company stated that the discovery well is producing from approximately 17 ft. of sand.

In the same county and about 2 miles northeast of the Texana field, Heep Oil Corp. is running casing preparatory to testing No. 1 Robertson. The well was drilled to 7,506 ft. and casing is being cemented, following an electrical survey and side-wall cores which showed possible distillate sands at 5,614 ft., 5,665 ft., and at 6,545 ft. About 1 mile northwest of the West Ranch field John Mayo and Kirkpatrick Drilling Co. staked location for No. 1 J. H. Tucker in the R. Musquez Survey.

Hebert, Smith, and Titanic Oil Co.'s No. 1 Boyt, a wildcat east of the Hankamer field, Liberty County, drilled to a total depth of 9,312 ft. in a sidetracked hole and cemented 810 ft. of 5-in. liner at 9,312 ft. The hole was plugged back to 9,032 ft., and the well is reported to have failed to flow when tested through perforated liner at 8,955-75 ft. The perforations have been cemented off, and another test is scheduled.

Possible production from a deeper sand in the Martha field, Liberty County was not encouraging, as Standard Oil & Gas Co.'s No. 1 Garrow is shut down waiting on orders, after a drill-stem test through perforated casing at 8,594-8,600 ft. recovered 7 thribbles of gas-cut drilling mud and 15 thribbles of salt water.

Phillips Petroleum Co. extended production on the northwest flank of the Port Neches field, Orange County, with the completion of No. 1 Stark, which flowed 4 bbl. of oil per hour through a 7/64-in. choke with tubing pressure 540 lb. The casing was sealed off. Gravity of the oil was 25.5°. The well was drilled to 7,012 ft., but production was obtained by perforating casing at 4,555-60 ft.

In the Ogburn area, Harris County, Joyce Richardson and others' No. 1 E. Marks is coring below 6,756 ft., following a 10-minute drill-stem test at 6,586-6,621 ft., which developed 450 lb. working pressure and recovered 360 ft. of gas-cut drilling mud. A previous test at 6,449-77 ft. showed 105 lb. working pressure and recovered 2,100 ft. of salt water.

Stanolind Oil & Gas Co.'s No. 1 J. A. Hulen, discovery well of the Alta Loma field, Galveston County, is flowing at the rate of 341 bbl. of net oil, plus 34 per cent salt water, per hour through a ¾-in. choke on one 4-in. flow line and a 40/64-in. choke on another 4-in. flow line. The company is laying a 6-in. oil line from Pan American Refining Co. plant at Texas City, a distance of about 11 miles. This well blew out the previous week while coring at 9,156-66 ft., and is flowing through the drill stem which is stuck several feet off bottom. The well will be allowed to flow until the gas pressure declines, and it will be killed and completed in the conventional manner. The Marginulina was topped at 8,330 ft.; Marginulina Vagintia at 8,450 ft., and the Marginulina-Howel at 8,690 ft.

Louisiana Coast

Along the Louisiana coast, Magnolia Petroleum Co. was preparing to test a new sand which was cored in No. 28 Cameron Meadows in the Cameron Meadows field, Cameron Parish. Sand, showing oil, was cored at 5,585-5,610 ft., and on a drill-stem test 4,000 ft. of oil was recovered. The hole was drilled to 6,252 ft., and casing cemented for a production test. The deepest pay in the field was recently established at 5,700 ft. in the company's No. 27 Cameron Meadows about 600 ft. northeast of the present well.

Location for a deep wildcat was announced for the Community Chapel area, Calcasieu Parish, by W. T. Burton. The well is on the Mayo Realty Co., Inc., lease in Section 11-8s-11w.

A slight extension for the West Hackberry field, Cameron Parish, was recorded by the completion of Superior Oil Co.'s No. 10 Vincent, completed through perforated casing at 7,700-7,800 ft., for an initial production of 388 bbl. of 34.6-gravity oil per day, flowing through a 12/64-in. choke. Tubing pressure was 1,000 lb. and casing pressure 1,100 lb.

On the Point au Fer prospect, Terrebonne Parish, Barnsdall Oil Co. was preparing to retest No. 1 Nelson after a 30-minute drill-stem test through perforated casing at 7,417-27 ft., recovered 1,000 ft. of drilling mud with no showings of oil or gas. The perforations have been squeezed off with cement, and the next test is scheduled to be made at 7,020-40 ft., where an electrical survey showed a possible sand section.

New Wells in Anse La Butte

Three producers were added to the Anse La Butte field, St. Martin Parish. Glassell & Glassell's No. 2-A Breaux flowed 129 bbl. daily through a 10/64-in. choke from perforated casing at 4,551-76 ft., while the same operators' No. 1 Patin flowed 275 bbl. daily through a 10/64-in. choke from sand at 4,745-59 ft. Stanolind Oil & Gas Co.'s No. 1 Bergeron, perforated casing at 4,682-4,702 ft., and the well flowed 152 bbl. in 7 hours through a ¼-in. choke.

The Paradis field, St. Charles Parish, was extended approximately 1,300 ft. west by Texas Co.'s No. 4 L. L. and E. Paradis. The well was drilled to 10,680 ft. and completed through perforated casing in a sand section at 10,355-80 ft. The Paradis structure is generally considered to be one of the largest in the district, and is in the early stages of development.

In the Venice field, Plaquemines Parish, Tide Water Associated Oil Co.'s No. 1 Johnson, was completed through perforated casing at 7,990-8,050 ft., and the well flowed 225 bbl. per day through a ⅛-in. choke.

TEXAS GULF COAST COMPLETIONS IN PROVEN FIELDS

(24-hour gages)

Chambers County

Turtle Bay field: Stanolind Oil & Gas Co.'s No. 1 Sherman, 6,705 ft., temporarily abandoned.

Fort Bend County

Thompson field: Gulf Oil Corp.'s No. 15-B Wolters, sand 5,394-5,410 ft., 145 bbl., ⅛-in. choke.

Harris County

Clear Lake field: Humble Oil & Refining Co.'s No. 41-C West, sand 5,905 ft., 66 bbl., ⅛-in. choke. Fairbanks field: Kirby Petroleum Co.'s No. 1 Harbaugh, perforated casing 6,824-25 ft., 47 bbl., ¼-in. choke. Amerada Petroleum Corp.'s No. 22 Foley, perforated casing 6,833½-39½ ft., 133 bbl., ¼-in. choke. Margay Oil Corp.'s No. 5 White, sand 6,821-28 ft., 104 bbl., ¼-in. choke. South Houston field: T. A. Carlton's No. 2 Williams, 3,970 ft., 91 bbl., ¼-in. choke.

Jackson County

Francitas field: British American Oil Co.'s No. 1 Community, perforated casing 7,955-57 ft., 152 bbl., ⅛-in. choke. West Ranch field: Magnolia Petroleum Co.'s No. 1 State, sand 5,096-5,107 ft., 530 bbl., ¼-in. choke.

(Continued on Page 83)

Improved Service, Same

PAST RECORD

For many years one of the distinctive characteristics of the Bridgeport Machine Company has been its ability to foresee and to adjust its methods, policies and services to the tempo of the constantly changing conditions and requirements of its customers. The past thirty-three years has seen Bridgeport, at various periods, specializing in shop service, in rental tool service, in the distribution of underreamers, in the merchandising of used equipment, in general equipment manufacturing, and in more recent years, in the distribution through branch stores of a complete line of oil field equipment. That its conception of how to continually provide needed and useful services has been inherently sound is shown by the progress made over a long period of years.

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Today another era dawns. With it Bridgeport brings its customers higher standards of efficiency and new methods of usefulness. Discontinuing its manufacturing activities at Wichita, Kansas, it now devotes its resources and facilities entirely to the distribution of products made by the large manufacturers and those highly specialized in the various phases of manufacturing. By so doing it is believed that Bridgeport can offer its trade more economical and better services throughout a larger area; and that its branch stores and sales and service offices, located in the active sections of the oil country, can serve the industry more usefully by furnishing the operator's choice of products in any territory.

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All patterns, blue prints, jigs and engineering data for equipment and tools formerly manufactured have been continued. In addition to handling the many products of other manufacturers, the same Bridgeport products, including drilling and fishing tools, rotary equipment, pumping units, underreamers, repair and replacement parts, rental tools and all other regular products and services are available through its branch stores, as they have been in the past.

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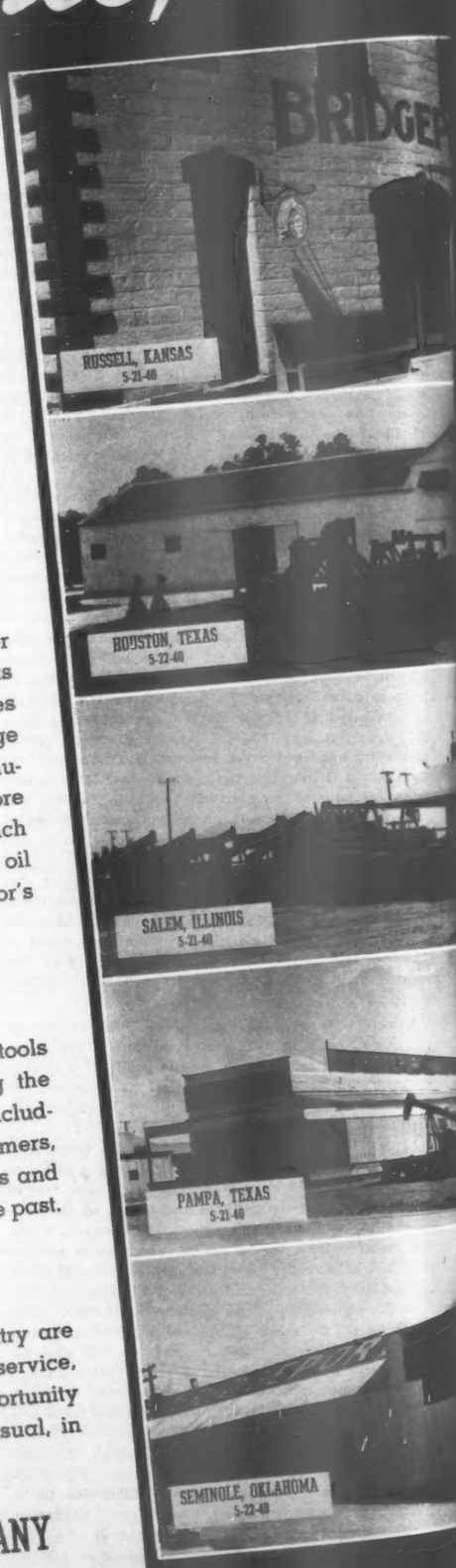
THE BRIDGEPORT MACHINE COMPANY



HOUSTON
DALLAS
TULSA

Company, Same Management

STATEMENT OF CONDITION OF

THE BRIDGEPORT MACHINE COMPANY

AS AT MAY 1, 1940

ASSETS	
CASH IN BANKS	$ 225,713.21
Customers Receivables Net	1,181,586.44
Inventories	1,585,802.76
Investments in Oil Properties	843,132.59
Fixed Assets, $470,462.98;	
Less Reserve, $235,913.92	234,549.06
Other Sundry Assets	85,085.41
Total	$4,155,869.47

LIABILITIES	
Current Notes Payable	None
Trade Accounts Payable (Not Due)	$ 152,896.72
Sundry Accruals	45,848.80
Term Indebtedness (Not Secured)	
Dated Dec. 10, 1938; Due Feb. 1, 1941	850,000.00
CAPITAL and SURPLUS	3,107,123.95
Total	$4,155,869.47

A. A. Buschow
President and General Manager

These photographs, taken May 21 and 22, show a few of our Branch Stores located at strategic supply centers in the oil country. Other warehouses and service branches serve active local territories. These, with Sales and Service Offices in the buying and operating centers provide economical and efficient Bridgeport service for producers and operators whose activities cover a wide area.

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Second Well in Soma Field; Mitchell County's Six Tests

By
D. H. STORMONT

MIDLAND, Tex., June 3.—Together with a second oil well in Crockett County's recently discovered Soma area and another gas blowout at Ward County's closely watched Delaware sand wildcat, activity in West Texas was featured by a stimulation of work in a wildcat area in northern Mitchell County. The wildcat spot embraces six tests within an area of about 5 sq. miles, all projected to the Ira pay, producing in the Ira field, about 3 miles north, in southern Scurry County.

With four wells already drilling in the area, one of which is indicating commercial production and a new-field discovery, two locations were made in the past week. About 3 miles south of N. V. Hilbun's No. 1 B. W. Jackson, indicated field opener in Section 82, Block 97, H.&T.C. Survey, Guy Ewing and associates located No. 1 L. A. Strain, 330 ft. south of the CNL Section 63, Block 97, H.&T.C. Survey. About 1¾ miles north of this new location is another staked by Dockery & Robbins for No. 1 C. G. Crawford, SW cor. Section 13, C. A. O'Keefe subdivision.

The indicated field opener, Hilbun's No. 1 Jackson, was last reported awaiting a shot in the prospective pays at 1,706-32 ft. and 1,736-39 ft. When bottomed at 1,736 ft. the well made 4 bbl. of oil daily. About a mile southwest of the indicated field opener is B. S. R. Oil Co.'s No. 1 B. A. Berry, SE cor. S½ E½ Section 83, Block 97, H.&T.C. Survey. It was last reported drilling below 900 ft.

A few failures have been drilled throughout the area during the past 10 years; some of them were drilled below 3,000 ft., but the majority were abandoned at about 1,500 ft. The development is on the south end of a trend play extending southward from the Sharon Ridge field in Scurry County and through the Ira field.

Crockett County

The second producer for the shallow area opened several weeks ago on the W. T. Noelke ranch in western Crockett County was seen at Lewis & Shannon's No. 1 Noelke, Section 30, Block GG, H.E.&W.T. Survey, an east offset to the discovery well. The drill found the first day at 1,064-72 ft., slightly lower than in the discovery well, which blew out at 1,035 ft. An increase in oil was found at 1,075 ft. With the well bottomed at 1,078 ft., oil rose to fill the hole in 10 hours. The bailer was run twice and the well cleaned itself with a 40-bbl. head and an estimated 500,000 cu. ft. of gas. On the last report the hole had been deepened to 1,100 ft. and storage was being erected.

Gas Blowout

After a 15,000,000-cu. ft. gas blowout several weeks ago, Kenneth Slack and Merry Brothers & Perini's No. 1 Bird Hayes, wildcat in central Ward County, drilled into another gas zone. The first blowout was at 5,053 ft., the top of the Delaware sand. The new zone was struck at 5,090 ft. and the well's output was estimated at 10,000,000 cu. ft. of gas with oil ranging from 2 bbl. hourly to 60 bbl. daily. Separator was installed and the flow was measured at 1 bbl. of oil and about 4 gal. of salt water per hour. Future course to be taken by the operators has not been determined.

Deep Holt Pay

Establishing the largest initial production from the Holt horizon in northern Ector County, Llano Oil Co. completed No. 2-B Holt, southeast offset to Gulf Oil Corp.'s discovery well, for 487 bbl. daily, flowing, after a 2,000-gal. acid treatment. Pay was found in the Holt lime of the Clear Fork series, about 1,000 ft. below the regular Double Mountain Permian pay section of Ector County. Pay was at 5,135-47 ft. This brings the total wells producing from this deep zone to six.

Andrews Wildcats

Due to approaching lease expiration, Atlantic Refining Co. staked two wildcats in Andrews County, both in the vicinity of a wildcat being drilled jointly by Atlantic and Helmerich & Payne, Inc. One of the new tests, a north offset to the drilling wildcat, is No. 1-2 University, Section 2, Block 11, University Lands Survey. On a short-term lease about 2 miles south of the partnership's active wildcat, Atlantic staked No. 1-23 University, Section 23, Block 11, University Lands Survey. Both operations are due to start immediately.

Tom Green County

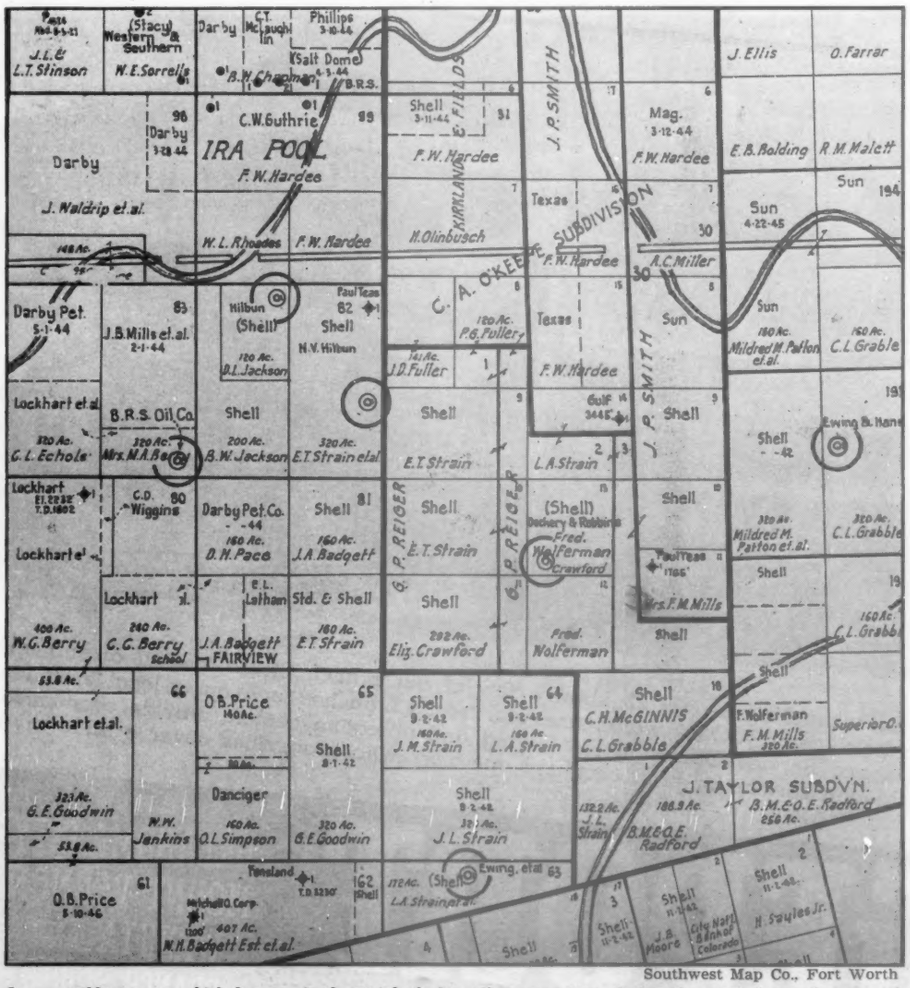
The first commercial oil producer in Tom Green County was gaged during the week. It is Bartlett C. Mann's No. 1 Joe Funk, in Section 32, Block 5, H.&T.C. Survey, about 25 miles northwest of San Angelo. On a 24-hour gage the well made 61 bbl. of oil, from lime at 1,168 ft. which had been treated with 1,000 gal. of acid.

Another test in the county attracting considerable attention is Dan Short and associates' No. 1 J. G. Davidson, northwest part of L. P. Moore Survey. The test is bottomed at 3,410 ft., in shale bearing an odor of oil. Operators are undecided whether to run 6⅝-in. casing or abandon at the present depth. Should the casing be set, the operators have announced that the test would be carried below the original 3,500-ft. contract depth.

North Basin Area

A new test has been staked in extreme southeastern Cochran County which will, if completed for commercial production, link the vast Slaughter field of Hockley County with the Duggan area of Cochran County. It is Texas Co.'s No. 1-F Mallett Land & Cattle Co., 580 ft. from the south and west lines of Labor 25, League 51, Scurry County School Land Survey. It is about ¾ mile northeast of Texas Co.'s No. 1 Boyd, outpost producer 3½ miles southeast of the Duggan field and a similar distance southwest of the western limits of the Slaughter field.

A new test for Terry County has been staked by Ray Albaugh, of Lamesa, as No. 1 Frances Christian, a 5,500-ft. wildcat, 4 miles southeast of Brownfield, in



Southwest Map Co., Fort Worth

A new wildcat area, which has received a total of six active operations during the past 2 months, one of which is indicating the discovery of a new producing area, is in extreme northern Mitchell County and just south of production in the Ira field of southern Scurry County

southern Terry County. It is in NW NW Section 49, Block T, D.&W. Survey. It is on a 9,700-acre block on the trend northward from Gaines County's Cedar Lake field.

WEST TEXAS FIELD COMPLETIONS

(24-hour gages)

Crane County

In the Dunes field, Kewanee Oil Co.'s No. 7-B University, 3,515-78 ft., 1,624 bbl.

Ector County

In the Johnson area A. & M. Oil Co.'s No. 7 Johnson, 4,170-4,274 ft., 307 bbl. Atlantic Refining Co.'s No. 4-E Johnson, 4,140-4,250 ft., 408 bbl. Ochiltree & Robinson's No. 1 L. E. Johnson, dry and abandoned at total depth of 4,340 ft. Schermerhorn Oil Co.'s No. 6-B Johnson, 4,050-4,189 ft., 435 bbl. Sunray Oil Co.'s No. 1-F Johnson, 4,115-55 ft., 336 bbl. Sunray Oil Co.'s No. 1-K Johnson, 4,140-4,325 ft., 109 bbl.

In the Foster field Atlantic Refining Co.'s No. 11 Henderson, 3,985-4,230 ft., 1,648 bbl. Great Western Producing & Refining Co.'s No. 4-E Johnson, 3,900-4,105 ft., 777 bbl. C. A. Everts' No. 1 John Gist, 4,183-4,304 ft., 250 bbl. Shell Oil Co., Inc.'s No. 2-C Witcher, 3,940-4,147 ft., 620 bbl. Stanolind Oil & Gas Co.'s No. 42 Witcher, 4,015-4,205 ft., 794 bbl.

In the Goldsmith field Gulf Oil Corp.'s No. 277 Goldsmith, 4,170-4,226 ft., 1,287 bbl. Gulf Oil Corp.'s No. 278 Goldsmith, 4,164-4,216 ft., 165 bbl. Gulf Oil Corp.'s No. 280 Goldsmith, 4,154-90 ft., 561 bbl. Phillips-Pure's No. 88 C. Cowden, 4,115-68 ft., 2,294 bbl. Tide Water Associated Oil Co.'s No. 2 T. & P. Land Trust, 4,075-4,200 ft., plugged back from 4,240 ft., 297 bbl.

Gaines County

In the Seminole field Atlantic Refining Co.'s No. 6-B Riley, 5,115-5,261 ft., 1,005 bbl.

Hockley County

In the Slaughter field J. W. Murchison's No. 5 Slaughter, 4,949-5,010 ft., 527 bbl. Stanolind Oil & Gas Co.'s No. 12-B Slaughter, 4,920-5,000 ft., 908 bbl.

Howard County

In the Snyder field Sinclair Prairie Oil Co.'s No. 8 Texas Land & Mortgage Co., abandoned location.

Pecos County

In the Yates field Ohio Oil Co.'s No. G-1-12 Yates, 487-500 ft., 30 bbl. In the Pecos field Sahara Oil Co.'s No. 1-22 Pecos Valley, dry and abandoned at total depth of 1,690 ft.

Tom Green County

A wildcat field opener, B. C. Mann's No. 1 Joe Funk, 1,121-1,160 ft., plugged back from 1,562 ft., 61 bbl. daily. Received 25 bbl. daily allowable.

Upton County

Gulf Oil Corp.'s No. 41 Crier-McElroy, 2,635-2,843 ft., 2,870 bbl.

Ward County

A. E. Lynch's No. 2 Miller-Reynolds, 1,945-55 ft., 187 bbl.

Yoakum County

In the Wasson field Aloco Oil Co.'s No. 5-C Willard, 4,905-5,175 ft., 1,746 bbl. Argo Oil Corp.'s No. 3-C Comer, 4,935-5,145 ft., 1,081 bbl. Honolulu Oil Corp.'s No. 6-890 Hovencamp, 4,880-5,085 ft., 1,072 bbl. Humble Oil & Refining Co.'s No. 5 Bennett, 5,020-5,220 ft., 546 bbl. Oil Development Co.'s No. 15-803, at 4,880-5,215 ft., 1,232 bbl. Shell Oil Co., Inc.'s No. 10-A Baumgart, 4,875-5,180 ft., 1,580 bbl. Shell Oil Co., Inc.'s No. 11-D Baumgart, 4,875-5,130 ft., 1,562 bbl. Shell Oil Co., Inc.'s No. 7-E Baumgart, 4,880-5,164 ft., 1,052 bbl.

WEST CENTRAL TEXAS

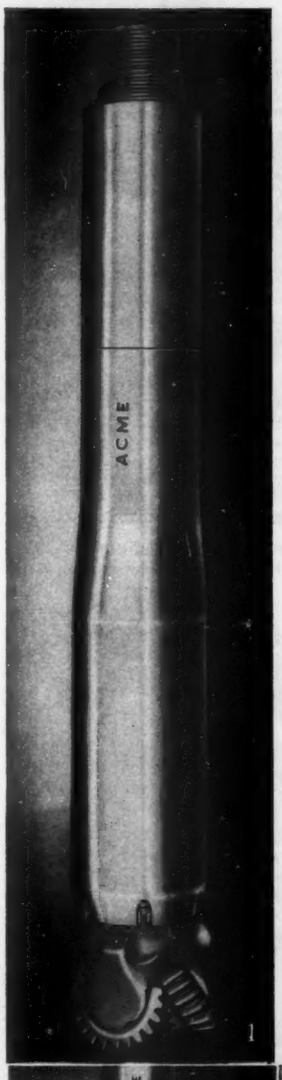
FORT WORTH, Tex., June 3.—Five new wells are being started in the West Central Texas district, all in wildcat territory and each in a different county.

In Brown County H. T. B. Production Co.'s No. 1 C. R. Smith is located 150 ft. from the north and west lines of S½ Section 31, H. P. Brewster Survey 290, and is contracted to 1,300 ft.

Callahan County's new operation is H. W. Lee's No. 1 Mary Harris. The location was announced 2 weeks

(Continued on Page 77)

The New Rotary Tool that "Stole the Show" Acme's MUD COLLAR



Yes, Acme's MUD COLLAR was a *big* hit at the Tulsa Oil Show! Rotary drillers, from everywhere, were eager to see and learn about this "Modern-day Marvel." Amazed at its simplicity, they said, "Why hasn't it been thought of before?" But they were "sold" that it will do well the job for which it is designed.

If you missed the Show, or missed seeing Acme's new, perfected, proven MUD COLLAR, write TODAY for complete information. A well illustrated, descriptive folder will tell you the story. No rotary driller can now afford to be "behind the times"—knowing that the MUD COLLAR is available, as the next step forward.

As pictured here, Acme's new "Wonder Tool" *is* a COLLAR, with rotary tool joint, used between the bit and drill collar. It houses a fluid "cylinder," from which 6 pressure streams flow over the bit, keeping it clean—preventing mud rings from forming. Delays in pulling out are thus practically eliminated. By keeping the bit clean, power consumption is reduced, cutting is faster, easier and smoother—making better hole, with less strain on drill pipe. All hazards of drilling—including time and money wasting fishing jobs—are greatly reduced.

Out in Illinois, where Acme conducted exhaustive tests, in perfecting the MUD COLLAR, the news "leaked out"—before we were ready to announce it. Many rotary drillers came—saw—and were *convinced*. Their composite opinion was, "Acme has certainly found the answer to a long endured, tough, costly problem." Advance orders were booked. Now we are ready to GO.

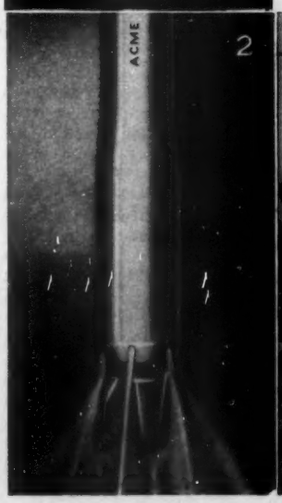
Prominent User Says:

"We are highly pleased with Acme's MUD COLLAR. Ours has made about 14 wells to date, eliminating lost time and trouble from 'balled up' bits. It has been a great benefit on fishing jobs, as it prevents mud from channeling to one side of the bit. In fact, we have enjoyed so many benefits from its use, we now unhesitatingly recommend the MUD COLLAR to the entire Oil Trade." (Signed) T. B. Hunter, Vice Pres., Schoenfeld-Hunter-Kitch Drilling Co., Salem, Ill.

Acme Fishing Tool Co.

Parkersburg, - - - W. Va.

(Patents Applied For)



(1) Acme's MUD COLLAR—with bit assembled—ready to go into trouble-preventing, profit-protecting service.

(2) Acme's MUD COLLAR "in action." 6 Fluid streams keep bit clean.

(3) Acme's MUD COLLAR on the job—it has just come from hole "as clean as a whistle."

(4) Mud rings, like this, are "going out of style"—with Acme's MUD COLLAR.

Users are Saying—

(1) "Acme's MUD COLLAR paid for itself 3 times over by washing loose on fishing job, by circulating through fluid tubes."

(2) "Keeps bit clean so drill pipe turns 25% freer."

(3) "Can pay for itself on one well."

(4) "Acme's MUD COLLAR is a 100% tool. If you want to *keep out of trouble*—USE IT!"

Kansas Developments

By DAL DALRYMPLE

Test Discovery in Jefferson; Stoltenberg, Brandt Extended

A discovery in the Stoltenberg district of Ellsworth County, an extension of the Brandt pool in Butler County and the opening of the first oil pool in the Kansas sector of the Forest City basin, featured field activities in the Sunflower State the past week.

J. A. Aylward and Central Petroleum Co.'s No. 1 Haska, CEL SE SE Section 6-16-10w, about 1¼ miles northwest of the Stoltenberg pool, Ellsworth County, was due for potential test. It was bottomed at 3,292 ft. in Arbuckle lime, and after being acidized with 1,200 gal. and 2,000 gal. was reported pumping at the rate of 23 bbl. of oil an hour. It is on a farmout from Carter Oil Co. An outpost southwest of Stoltenberg production apparently was a failure. It is Sharon Drilling Co. and others' No. 1 Novatny, CNL NW NE Section 32-16-10w, about 1 mile southwest of the pool. Although it had a showing of oil and some fluid in the hole, acidizing and shooting failed to develop commercial production and it was shut down for orders. Total depth was 3,318 ft. in Arbuckle lime.

Young & McLaughlin's No. 1 McLeod, C NW SW Section 4-10-20, oil discovery well in Jefferson County, Forest City basin, was reported to have pumped 70 bbl. of oil in 12 hours, with no water. Gravity of the oil was 21.3°. Production is from Mississippi lime pay at 1,594½-96 ft., total depth. Testing continued. This is the first oil discovery in the Kansas sector of the Forest City basin, although an oil pool was opened on the south flanks of the basin in Johnson County last year. Location of the discovery well is ¼ mile southwest of the same operators' gas discovery well.

Rex & Morris' No. 1 Greeley, NE NE SE Section 16-28-7e, extended the Brandt pool in Butler County ½ mile westward. It found Mississippi lime at 2,655-72½ ft., total depth, oil rose 900 ft. in the hole overnight and operators began a pumping test.

S. W. Forrester and others' No. 1 Altenbernd, SW SE NW Section 35-12-20, wildcat 4 miles east of Lawrence, Douglas County, was preparing to start drilling, with Arbuckle lime as the goal, expected around 2,000-2,100 ft.

Completion of a ⅝-mile-northwestward oil extension to the Chase (Arbuckle) pool of western Rice County was reported officially Wednesday by the Kansas Corporation Commission.

It is Andy S. Ritchie, E. C. Moriarity and McPherson Drilling Co.'s No. 1-B Patton, in the SE cor. Section 9-19-9w.

The extension drew an initial potential of 3,000 bbl. of oil per day, following acid treatment, after top potential limitation, from a total depth of 3,213 ft. in the Arbuckle dolomite.

Southern Butler County gained a new Simpson sand pool Wednesday 1 mile south of the Haverhill pool and 6 miles southeast of the town of Augusta.

The discovery is that of James H. Cromwell and others' No. 1 Clark, NE cor. Section 3-28-5e, which filled 2,700 ft. with oil within a few hours from a total depth of 3,080 ft. Earlier, the well found only barren sand in the Burbank.

Haverhill pool production is obtained from the Burbank sand.

Operators staked location for the first offset at the diagonal northeast location.

Rice County

Continental Oil Co.'s No. 5 Johnson, NE SW SW Section 12-18-8w, Geneseo area, found Arbuckle at 3,194-3,237 ft., total depth; swabbed 259 bbl. of oil in 9 hours; acidized and pumped 349 bbl. of oil and no water. Initial potential was 1,047 bbl. of oil daily.

Skelly Oil Co.'s No. 4 Siedd, CSL NW SW Section 27-19-9w, Campbell pool, had 1,500 ft. of oil in the hole, was treated and made echometer potential of 2,833 bbl. of oil.

Duwe & Farris' No. 1 Dippel, CNL NW NW Section 26-19-10w, Silica pool, found Lansing pay at 2,971-72 ft. and 3,018-21 ft.; had total depth at 3,303 ft., pumped 115 bbl. of oil and 115 bbl. of water in 8 hours. Initial potential was 347 bbl. of 45-gravity oil per day.

Continental Oil Co.'s No. 4 Gumm, CEL NW SE Section 34-19-10w, had Arbuckle at 3,299-3,309 ft., total depth, and pumped 149 bbl. of oil with no water in 8 hours. Initial potential was 449 bbl. of oil.

Transwestern Oil Co.'s No. 3 Volkland, CWL SW NE Section 5-18-10w, Bloomer area, found Arbuckle at 3,205-20 ft., total depth, had 2,400 ft. of oil in the hole in 3 hours and was completed for the maximum potential of 3,000 bbl. daily.

New work in Rice County: Continental Oil Co.'s No. 4 Mickekis, SE NW SW Section 12-18-8w, location; El Dorado Refining Co.'s No. 2 Oden, CSL SE NW Section 6-21-7w, rigging up rotary; Sinclair Prairie Oil Co.'s No. 5 Specht, CWL NE SE Section 20-20-10w, building rig; Vickers Petroleum Co.'s No. 1 Barjer, CEL SE NW Section 20-20-10w, rigging up rotary.

Estimated Daily Production

Estimated daily production for Kansas for the week ended June 1, and for the preceding week was as follows:

	Barrels	
	June 1	May 25
Oxford City	700	700
Burrton	7,950	8,000
Ritz-Canton	3,650	3,600
Graber	2,800	2,750
Hollow-Nikkel	1,400	1,450
Lerado	500	500
Voshell	1,550	1,550
Wellington	1,750	1,700
Ellsworth County:		
Lorraine	1,500	1,500
Other pools	2,033	2,130
Rice-Barton counties:		
Bloomer	4,000	3,400
Chase	3,650	4,100
Geneseo	2,500	2,950
Raymond	1,000	500
Silica	11,450	10,500
Keesling	800	850
Wherry	2,850	4,250
Miscellaneous Rice	50	2,980
Miscellaneous Barton	8,994	6,265
Trapp district	11,550	12,250
Balance Russell County	16,750	16,000
Sedgwick County	3,200	3,250
Ellis County:		
Bemis	7,250	7,100
Miscellaneous	3,970	5,700
Kingman County	525	555
Stafford County	7,605	7,235
Greenwood County	8,250	7,800
Eldorado	7,300	7,350
Other fields	33,323	33,585
Total Kansas	158,850	160,500

Ellsworth County

Continental Oil Co.'s No. 4 Rolfs, SE SE NE Section 28-17-8w, Edwards pool, had Arbuckle pay at 3,191-3,220 ft., total depth; pumped 356 bbl. of oil in 8½ hours and was completed for the pool's maximum potential of 3,000 bbl.

Skelly Oil Co.'s No. 1 Janzen, CNL NW SE Section 18-17-9w, Wilkens pool, reached Arbuckle at 3,250-53 ft., total depth, and was completed for maximum potential of 3,000 bbl.

Beardmore Drilling Co.'s No. 1 Talsky, CEL SE NE Section 8-16-10w, Stoltenberg area, had Arbuckle from 3,290 ft. to 3,312 ft., total depth, swabbed 60 bbl. hourly and made potential of 3,000 bbl. of oil per day.

Mid-Continent Petroleum Corp.'s No. 1 Matosh, CSL NE NE Section 34-16-10w, Ehler pool, reached Arbuckle at 3,275-95 ft., total depth; pumped 103 bbl. of oil in 8 hours and made initial potential of 311 bbl. of oil.

H. B. Mabee's No. 1 Kozisek, CNL NE SE Section 18-16-10w, was bottomed at 3,420 ft., with no shows and was dry and abandoned.

Continental Oil Co.'s No. 5 Buehler, NE NE SE Section 33-17-8w, was a location. Comet Drilling Co.'s No. 1 Wilkens, CNL NW SW Section 18-17-9w, rigging up rotary.

McPherson County

Westgate-Greenland Oil Co.'s No. 1-A Union, CEL SW NE Section 18-17-1w, Roxbury pool, had Mississippi pay at 2,663-73 ft., total depth; was treated with 1,000 gal., pumped 635 bbl. of oil in 8 hours and made potential of 1,905 bbl. of oil per day.

E. B. Shawver's No. 5 Union Life, CSL SW SW Section 18-17-1w, found Mississippi lime from 2,693-2,712 ft., total depth; pumped 298 bbl. of oil in 8 hours and pumped potential of 895 bbl. of oil.

Sunray Oil Co.'s No. 2 Lindquist, CWL SE NW Section 29-20-5w, Bornholt pool, flowed 90 bbl. of oil in 1 hour from Mississippi topped at 3,363 ft., and was completed for the pool's maximum of 3,000 bbl. Total depth was 3,382 ft.

Republic Natural Gas Co.'s No. 4 Knackstedt, CSL NW NW Section 30-20-5w, had Mississippi at 3,276-3,333 ft., total depth, swabbed 14 bbl. of oil per hour and pumped potential of 120 bbl. of oil daily.

New wells reported in McPherson County were: E. B. Shawver's No. 6 Union, CWL NW SE Section 18-17-1w, location; Westgate-Greenland Oil Co.'s No. 3 Henne, CWL SW SE Section 18-17-1w, location; Bradley Brothers' No. 2 Malton, CNL SE SW Section 19-20-5w, building rig; Continental Oil Co.'s No. 3 Bornholt, CNL SE SE Section 30-20-5w, moving in material; and the No. 3 Knackstedt, CNL SE NW Section 30-20-5w, was building rotary rig.

Russell County

Three completions in the Trapp pool of Russell County were: Coralena Oil Co.'s No. 8 Sellers, SE SW SE Section 20-15-13w, topped Arbuckle at 3,297-3,302 ft., total depth, and pumped initial potential of 340 bbl. of oil.

Same company's No. 3 Trapp, NW NE NE Section 29-15-13w, found Arbuckle at 3,296-3,301 ft., total depth; pumped 232 bbl. of oil in 2 hours and made an estimated potential of 2,500 bbl. daily.

W. I. Southern's No. 5 Trapp, NE NW NE Section 29-15-13, had Arbuckle from 3,321-26 ft., total depth, was acidized and pumped 197 bbl. of oil daily.

Two completions in the Zenith pool were: Stanolind Oil & Gas Co.'s No. 6 Sims, CWL NW NE Section 11-24-11w, which flowed 65 bbl. of oil the first hour, was acidized and completed for maximum potential of 3,000 bbl. of oil.

Same company's No. 10 Martin, CWL SW NW Section 14-24-11w, had Misener-Viola at 3,772-3,832 ft., flowed 33 bbl. of oil hourly and made initial potential of 2,700 bbl. of oil and 300 bbl. of water per day. Total depth was 3,893 ft.

Same company's No. 10 Roesner, SW SW SE Section 9-15-13w, was digging cellar; Alva Billings' No. 3 Herbel, SE SW SW Section 26-14-14w, digging pits.

Ellis County

Dickey Oil Co.'s No. 2 Henderson, CWL SW SW Section 6-11-17w, Burnett pool, drilled Arbuckle lime from 3,487-93 ft., total depth, and pumped 1,482 bbl. of oil per day.

Same company's No. 3 Kollman, CNL NW SE Section 18-11-17w, was completed for maximum potential of 3,000 bbl. from the Arbuckle found at 3,364-66 ft., total depth.

Bay Petroleum Co.'s No. 3-A Ridler, NW NE NE Section 12-11-18w, had 2,950 ft. of oil in the hole in 1¾ hours and made maximum potential of 3,000 bbl. from Arbuckle lime found at 3,446-52 ft., total depth.

Republic Natural Gas Co.'s No. 4-A Bemis, CNL NW SW, Bemis pool, made potential of 3,000 bbl. daily from the Arbuckle topped at 3,468 ft. Total depth was 3,477 ft.

Cities Service Oil Co.'s No. 3 McCord, NW NE NE Section 26-11-17w, found Arbuckle at 3,522-28 ft., total depth, and made 3,000 bbl. of oil daily, initial potential.

New work in Ellis County: Darby Petroleum Co.'s No. 8 Henderson, CEL NW NW Section 7-11-17w, waiting on cement at 1,197 ft.; same company's No. 4-B Hadley, CSL SE NW, and the No. 3-A Peavey, CNL NE SW, both of Section 13-11-18w, were locations. Tide Water Associated Oil Co.'s No. 2 Ridler, CEL SE SW Section 1-11-18w, building rig.

Barton County

One producer in the Clawson pool and one dry hole in each the South Silica and Kraft pools were reported for the week. Shell Oil Co.'s No. 2 Kowalsky, SW NE SE Section 18-20-11w, was completed for the maximum potential allowable of 3,000 bbl. of oil. Production in the Arbuckle lime was found at 3,281-91 ft., total depth. On a 3-hour test 170 bbl. of oil was swabbed, 1,400 ft. off bottom.

National Refining Co.'s No. 1 Kraft, CWL NW NW Section 2-17-11w, topped Lansing at 3,050 ft., Arbuckle at 3,377 ft., had a showing of oil at 3,075-80 ft. but encountered water at 3,394-3,400 ft., total depth, and was dry and abandoned.

Stanolind Oil & Gas Co.'s No. 3 Werries, SW SE SW Section 10-20-11w, swabbed 1 bbl. of oil and 13 bbl. of water, after acid treatment, from Arbuckle lime at 3,295 ft. and was abandoned.

Butler County

Adair & Morton's No. 9 Brandt, NW NW NE Section 15-28-7, Brandt pool, had Mississippi pay at 2,725-65 ft., total depth, was acidized and pumped 25 bbl. of oil daily.

Same company's No. 10 Brandt, NE NW NE Section 15-28-7, pumped 35 bbl. of oil per day from Mississippi found at 2,740 ft. Total depth was 2,763 ft.

Blue Jay Oil Co.'s No. 1 Clark, SW NE NW Section 21-28-4, Augusta pool, pumped an estimated 25 bbl. of oil daily from lime at 2,480-95 ft., total depth. Gravity of the oil is 32.8

Adair & Morton's No. 2-A Thomas, SE SW SE Section 10-28-7, was rigging up machinery; Sinclair Prairie Oil Co.'s No. 10 Watts, CEL SE SE Section 13-26-4, rigging up machinery.

New work in Stafford County was as follows: Shell Oil Co.'s No. 1 Brown, SW NW SW Section 2-24-11w, digging cellar; Stanolind Oil & Gas Co.'s No. 5 McComb, CWL NW SW Section 14-24-11w, building rig; same company's No. 2 Krug, CEL NE SW Section 2-22-12w, building rig.

Barbara Oil Co.'s No. 1 Trice, C N½ SW Section 9-33-13w, Barber County, was digging cellar.

Forest City Basin

ST. JOSEPH, Mo., June 3.—Harry Harper of Odessa, Tex., in making one of two Nebraska starts the past week, has a rotary test that may determine trend of the Falls City pool in Richardson County.

Harper's well is No. 1 Sibbernsen, SE NE NW Section 20-1n-16e. This is three-quarters of a mile southeast of Pawnee Royalty Co.'s No. 1 Bucholz, flowing 330 bbl. of oil daily from a total depth of 2,232 ft. No. 1 Bucholz, in turn, is a half mile south and a quarter mile east of the discovery, No. 1 Boice, which is producing both oil and water, lies 57 ft. lower than the Bucholz well and generally is regarded as an edge well.

Should Harper's well run still higher than the No. 1 Bucholz it probably will mean there is a southeast trend to the pool. A hit will result in offset wells by both Skelly Oil Co. and the Pawnee Royalty Co. Also holding acreage in that direction is the Ohio Oil Co.

The other start of the week was the Forest City Basin Syndicate's No. 1 Windle in SE NE SE Section 3-1-15, Richardson County, on the east edge of Salem. E. L. Dodge of Tulsa, a member of the syndicate, is drilling the well and the syndicate has plans for two more, one to the north and one to the south.

No. 1 Bucholz now is producing under inspection. Two Nebraska State witnesses at the end of 60 days will certify that the well has produced at least 50 bbl. daily for 60 consecutive days. The state has agreed to pay a $15,000 bonus for that accomplishment.

P. L. Kent of St. Joseph announced a farmout deal with L. M. Tully of Los Angeles for a rotary test in S½ SW SE Section 16-1-16, Richardson County. This is a mile and three-sixteenths east and a little south of the No. 1 Bucholz well and the well will be drilled on a 20-acre lease with no block involved. It is the first deal of its kind. Kent said drilling would start within 30 days.

Most of the Missouri wildcat tests are going again or about to go. George Vincent's No. 1 Dillingham in C NE SW Section 16-53n-34w, Platte County, topped Hunton at 1,475 ft., where there was a little gas. The test went into water and drilling was to continue. There was 372 ft. of Mississippi lime and 30 ft. of Kinderhook shale.

Brin & Nathan's No. 1 Decker, in C NW NW Section 1-61n-38w, Holt County, was approaching Mississippi lime. Eight-inch pipe was being underreamed to 1,685 ft.

American Oil & Gas Corp.'s No. 1 Thompson, in SW SW Section 30-58-31, Holt County, set surface pipe at 62 ft. and was drilling below 140 ft.

Baldwin's No. 2 Johnson, in SW NE Section 21-65-15, Schuyler County, was about to drill into the Mississippian section that had good oil showings in the No. 1-A Johnson, 1,000 ft. north. The showings were found at 731 ft.

Little news of consequence came from other Missouri tests.

Indiana Field

(Continued from Page 61)

at 1,064 ft. It topped the Chester series at 983 ft. Snell and others were rigging up machhine for No. 2 Biggerstaff, 500 ft. from the west line and 600 ft. from the south line of SW Section 6-7s-7w. Mecca Oil Co.'s No. 1 Seay, NW NW SW Section 32-7s-6w, had 1,000,000 cu. ft. of gas at 620-24 ft. but a hole full of water at 637-40 ft. Six-inch casing was run to 637 ft. Kentucky Natural Gas Co. completed a 300,000-cu. ft. gas well in No. 1 Yeager, C NW NE Section 31-7s-6w, in sand at 922-30 ft. It also sprayed some oil. J. W. Hendrickson and others were drilling at 700 ft. in No. 1 Williamson, approximately 2,640 ft. from the east line

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FIG. 3003 CLASS 300 CAST STEEL GATE VALVE
FIG. 275 BRONZE GATE VALVE
FIG. 190 IRON BODY GLOBE VALVE
LONG LIFE, ALL TYPES AND SIZES, EXACTING WORKMANSHIP
FIG. 102 BRONZE GLOBE VALVE
FIG. 1440 IRON BODY GATE VALVE
FIG. 1793 IRON BODY GATE VALVE
WRITE FOR FURTHER INFORMATION AND DETAILS
THE WM. POWELL COMPANY
CINCINNATI, OHIO

and 660 ft. from the south line of SW Section 31-7s-6w. Damrom Brothers have started drilling No. 1 Boyd, NE cor. SW SE Section 30-7s-6w. Kentucky Natural Gas Co.'s No. 1 Werthwein, W½ SW SE Section 29-7s-6w, had sand at 641-43 ft., with 1,591,000 cu. ft. of gas, which increased to 2,000,000 cu. ft. at 643-46 ft. Completion was held up by hole trouble. Damron Brothers have a 5,410,000-cu. ft. gasser in No. 1 Beckort, C NE SW Section 29-7s-6w, from pay at 927-35 ft. C. J. Williams and others were drilling at 710 ft. in a hole full of water in No. 1 Walker, NE NE NW Section 6-8s-6w, and Blosser and others were drilling at 425 ft. In No. 1 Harvey, NW SW NW Section 4-8s-6w. Rogers and others' No. 1 Miller, SE cor. SW Section 32-6s-7w, was dry and abandoned at 1,060 ft.

Outside Tests

In Daviess County J. W. Cannon and others' No. 2 Evans, SW SE NE Section 8-2n-5w, was drilling at 450 ft.

In Pike County W. H. Trent and others' No. 1 Stone, SW NW NW Section 21-1n-7w, was drilling at 250 ft.

In Huntington County W. J. Anderson made a location for a Trenton lime test, No. 1 Hays, 300 ft. from the north line and 900 ft. from the east line of SW Section 6-26n-10e.

In Randolph County Charles Godwin and others' No. 1 St. John, C NE NE Section 8-21n-12e, was being rigged up to pump, total depth 1,275 ft.

In Boone County N. N. Smith and others made a location for No. 1 Marshall, in NW cor. NE Section 34-19n-2e.

In Floyd County L. A. Albertson and others' No. 1 V. McKown, SW cor. SE SE Section 32-18n-5e, topped Devonian lime at 794 ft.; had showings of oil at 794-96 ft., and a small show of gas at 810-20 ft. The well was drilling at 825 ft.

In Decatur County Hoosier Public Utilities Co. staked location for No. 211 Keeton, C SW SW Section 11-9n-9e. Same company's No. 210 Rennegan, C NE SW Section 11, is a 141,000-cu. ft. gas well from Trenton lime at 974-75 ft., total depth. It was completed.

In Bartholomew County Haw Creek Oil Petroleum Co. made a location for a Trenton lime test, No. 1 Fishel, 772 ft. from the north line and 590 ft. from the east line of Section 15-10n-7e.

In Greene County Schicker & Lyon's No. 1 Kiser, NW NW NW Section 4-7n-5w, was drilling at 2,390 ft. Commonwealth's No. 1 Tucker, NE SE NE Section 16-6n-6w, had water at 985-90 ft. and was shut down at 1,023 ft.

In Sullivan County O. A. Thayer and others' No. 1 Crowder, SE SW SW Section 3-7n-9w, was abandoned at 830 ft. The hole filled with water at 655 ft.

In Knox County Sun Oil Co.'s No. 1 Utt, Donation 182-4n-9w, was abandoned at 3,252 ft. It topped Devonian lime at 2,943 ft. and ran into water at 3,212 ft.

In Warrick County L. B. Jackson's No. 1 Schumacher, NE NW NW Section 34-3s-8w, was drilling at 1,345 ft. Tar Springs sand was topped at 1,208 ft.

In Pike County George W. Miller is preparing to deepen No. 1 Nixon, SE SW NE Section 14-3s-8w, which is now at a depth of about 4,000 ft. The crew is cleaning out.

In Vanderburg County J. L. Drake made a location for No. 10 Effinger, SW SW NW Section 33-5s-10w. Vanderburgh Oil Corp.'s No. 11 Hornby, SE NW SW Section 33-5s-10w, was drilling in a hole full of water at 2,062 ft.

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OHIO

NEWARK, Ohio, June 3.—Nineteen completions were reported in the Ohio fields covered in this report, nine oil wells, three gas wells, and seven dry holes. New oil production amounts to only 124 bbl. Licking County yielded a fair gas well.

In Athens County, Carthage Township, Fairfield Gas Co.'s No. 5 J. L. Varner, frac. 3, gaged 600,000 cu. ft. of gas, open flow, from Keener sand at 1,205 ft. C. W. Zuzum's No. 1 Albert Balls heirs, Section 34, made 150,000 cu. ft. of gas, open flow, from the Salt sand, depth 999 ft.

In Guernsey County, Wills Township, Jewell Co.'s No. 2 R. A. Robinson, Section 16, had a settled production of 3 bbl. of oil from the M-500 sand at 467-81 ft.

In the Newark field, Licking County, Madison Township, Dowler Oil & Gas Co.'s No. 2 Lester Holz, Lot 2, second quarter, is a gas well good for 1,500,000 cu. ft., open flow, with the Clinton at 2,640-69 ft.

In Lorain County, Penfield Township, Wiser Oil Co.'s No. 4 Thomas Szuces, Lot 45, Berea dry, depth 246 ft.

In Medina County, Chatham Township, Preston Oil Co.'s Nos. 21 and 22 Susan Homan, Lot 4, Tract 10, both dry, depths 338 ft. and 335 ft.

In Morgan County, Marion Township, Lot 31, Shaw and others completed a 2-bbl. oil producer in the first Cow Run at 442 ft. In York Township Gas Producing Co.'s No. 1 Andrew Komaromy, Section 22, made 17 bbl. of oil the first day after shot; Clinton at 3,763-98 ft.

In Noble County, Olive Township, E. E. Walters and others' No. 1 Sebastian Crock, Lot 26, made 1 bbl. of oil a day from the M-300 sand at 277-82 ft. In Wayne Township Eugene Ward's No. 1 G. R. House, Section 2, abandoned at 743 ft.

In Perry County, Clayton Township L. L. Dittoe and others' No. 3 C. A. Beacham, Section 17, flowed 20 bbl. of oil the first 20 hours after the shot; Clinton at 3,311-47 ft. In Coal Township Preston Oil Co.'s No. 9 C. E. Trimmer, Section 36, had a show of oil in the Clinton, shot it with 90 qt.; abandoned after testing; depth 3,711 ft. In Salt Lick Township Swingle and others' No. 1 George W. Ricketts, Section 18, was shot twice in the Clinton, made 5 bbl. the first day after the second shot, depth 3,213 ft.

In Washington County, Fearing Township, E. W. Haas' No. 1 Charles Kuntz, Lot 100, made 10 bbl. of oil the first day after shot in the M-500 sand at 994-99 ft. In Grandview Township J. T. Campbell's No. 1 Anna McMahon, Section 33, is a 4-bbl. pumper in the second Crow Run sand at 695-710 ft. In Ludlow Township McVay Brothers' No. 8 George Armstrong, Section 16, is dry, depth 775 ft.

In Wayne County, Canaan Township, Obermiller Brothers' No. 1 C. S. Montgomery, Section 2, had a showing of gas in the Berea; abandoned at 462 ft.

In Franklin County Carl Blacksten and others have abandoned their test in Madison Township on the E. J. Simms tract, Section 15. As previously reported this test was drilled to the Blue Lick water to a depth of 2,903 ft. A showing of oil in the Trenton failed to improve after it was shot twice and given two acid treatments.

California Field Report

By L. P. STOCKMAN

Large New Wells in 6 Pools With San Miguelito Leading

LOS ANGELES, Calif., June 3.—Twenty-one oil wells and 4 dry holes were completed in California in the past week, wells of large production resulting in the Coalinga, Greeley, Rio Bravo, Rosecrans, Strand, and San Miguelito fields.

In the East Coyote field of Fresno County Shell Oil Co. completed No. 54-2 in Section 2-20-15, pumping 425 bbl. of clean 25.9-gravity oil per day from the Temblor with bottom of the hole at 3,745 ft. This well logged top of the Temblor at 3,385 ft. and drilled through 360 ft. of formation, but only 268 ft. is open to production as the rest of the 5½-in. liner, which was landed at 3,740 ft., was blank pipe. This well failed to show the large initial recorded by No. 22 Guardian of Tide Water Associated Oil Co. in the same section. No. 22 Guardian showed a potential of 1,196 bbl. of 31.6-gravity oil, but production of the well registered a consistent decline since completion. The large production of both wells is surprising, as the East Coalinga field has been producing for a number of years and has reached the depletion stage.

Current daily production of leading California fields follows:

	Barrels
Wilmington	84,425
Kettleman North Dome	46,185
Midway-Sunset	45,850
Long Beach	42,500
Ventura Avenue	34,000
Coalinga	28,100
Huntington Beach	25,400
Santa Fe Springs	24,925
Montebello	22,650
Santa Maria Valley	15,750

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	May 26		May 19			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	.....	.....	.....	.....	144,217	247,520
Fuel oil	.....	.....	.....	.....	188,938	884,491
Diesel and gas oil	.....	.....	.....	.....	.....	163,501
Gasoline	.....	.....	.....	.....	1,132,395	1,348,513
Kerosene	.....	.....	.....	.....	.....	122,200
Foreign exports—						
Crude oil	.....	.....	312,420	44,631	5,043,120	5,946,797
Fuel oil	199,784	28,541	112,295	16,042	3,162,426	3,340,243
Diesel and gas oil	28,111	4,016	77,649	11,093	2,612,018	2,598,515
Gasoline	143,403	20,486	.....	.....	2,061,917	3,143,697
Kerosene	47,069	6,724	.....	.....	450,029	621,586
Lubricants	1,336	191	.....	.....	79,134	42,034
Coastwise-domestic—						
Crude oil	115,239	16,463	79,684	11,383	3,897,590	5,193,814
Fuel oil	480,747	68,678	209,196	29,885	6,333,509	3,762,253
Diesel and gas oil	39,222	5,603	26,338	3,763	1,198,150	1,049,270
Gasoline	215,231	30,747	508,816	72,688	6,568,428	5,784,582
Kerosene	13,943	1,992	6,997	1,000	228,879	168,911

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	67,840	61,281
Diesel and gas oil	.....	.....	.....	.....	281,260	69,550
Asphalt	.....	.....	.....	.....	174,268	280,447
Lubricants	.....	.....	.....	.....	11,151	11,184
Foreign exports—						
Crude oil	111,423	15,918	.....	.....	1,598,957	2,363,966
Fuel oil	90,802	12,972	.....	.....	746,411	1,243,261
Diesel and gas oil	66,223	9,460	.....	.....	1,174,680	895,530
Gasoline	38,288	5,470	.....	.....	1,063,726	1,296,429
Kerosene	14,529	2,076	.....	.....	217,068	305,252
Asphalt	.....	.....	.....	.....	.....	6,919
Lubricants	39,147	5,592	.....	.....	193,687	202,625
Other finished oil	113	16	.....	.....	619	352
Coastwise-domestic—						
Fuel oil	65,241	9,320	101,826	14,547	2,391,029	2,325,578
Diesel and gas oil	.....	.....	18,212	2,602	458,721	382,847
Gasoline	68,132	9,733	130,118	18,588	2,699,469	2,813,958
Kerosene	.....	.....	19,246	2,749	235,333	271,007

Northeast Coalinga

Two excellent wells were completed in the Northeast Coalinga field, although neither was given a production test. In Section 19-19-16 Standard Oil Co. completed No. 53-19-B on fee-owned acreage, flowing 2,178 bbl. of 27.1-gravity oil and 744,000 cu. ft. of gas per day from the Gatchell sand with bottom of the hole at 8,275 ft. The log shows top of the Kreyenhagen at 8,555 ft., top of the glauconitic at 7,700 ft., top of the Gatchell sand at 8,097 ft., and base of the Gatchell at 8,273 ft. This gives the well a penetration of 176 ft. of rich oil sand from which to produce if desired. Production is coming through 8,251 ft. of combination 2-in. and 2½-in. tubing. North of this well Superior Oil Co. completed No. 5 Husong in Section 18-19-16, flowing 1,162 bbl. of 26.7-gravity oil and 640,000 cu. ft. of gas per day from the Gatchell sand, with bottom of the hole at 8,245 ft. As was the case with Standard's No. 53-19-B, Superior Oil Co. blanked off the top of the Gatchell sand and instead of producing the entire 189 ft. of oil sand is producing only the lower 70 ft. The log shows top of the Kreyenhagen at 6,930 ft., top of the glauconitic at 7,911 ft., top of the productive Gatchell zone at 8,054 ft., and base of the Gatchell at 8,243 ft.

Southeast Coalinga

In the Southeast Coalinga field Superior Oil Co. completed No. 3-B Cagle in Section 6-20-16 flowing 1,240 bbl. of 27.8-gravity oil and 810,000 cu. ft. of gas daily from the Gatchell sand with bottom of the hole at 8,228 ft. Top of the upper member of the Kreyenhagen was at 6,483 ft., top of the Gatchell at 7,787 ft., and base of the Gatchell at 8,225 ft. It was finished producing from the entire penetration. R. S. Lytle picked up a stray sand in No. 68-18-F in Section 18-20-16 and on a formation test at 7,452-7,522 ft. the well flowed at the rate of 7,000,000 cu. ft. of wet gas and a spray of 58.5-gravity oil daily. This finger is above the top of the productive Gatchell sand, cored at 7,600 ft.

Up in the Cantua district of Fresno County and north of the Northeast Coalinga field Texas Co. is still working on No. 1 Southern Pacific in Section 23-17-15 and hopes to make a productive well if the water trouble can be remedied. The showing of No. 1 Southern Pacific will undoubtedly result in the drilling of a second well by Texas Co.

In the Panoche Creek district, northwest of the Northeast Coalinga field, A. T. Jergins Trust has decided to proceed with a production test following the failure to find oil sand in the bottom of the hole. This wildcat is bottomed at 9,225 ft., but has been plugged back to the top of the Cretaceous, where a promising oil sand has been logged. Storage tanks have been erected and gas traps have been standing for more than a week.

Greeley

General Petroleum Corp., on the north flank of the Greeley field of Kern County, in the San Joaquin Basin, completed No. 1 Oughton in Section 12-29-25, flowing 1,130 bbl. of 38.5-gravity oil and 1,184,000 cu. ft. of gas daily from the Rio Bravo sand, with bottom of the hole at 11,510 ft. It logged top of the productive Rio Bravo zone at 11,315 ft. and found the base of the grit at 11,340 rt.

Canal—Ten Section

Ohio Oil Co. appears to have defined the limits of production in the eastern end of the Canal field of Kern County as its No. 19-E Kern County Land in Section 13-30-25 came in flowing 559 bbl. of 34.2-gravity oil and 290,000 cu. ft. of gas per day along with salt water from the Stevens sand, with bottom of the hole at 8,307 ft., but plugged back to 8,265 ft. The initial production showed a cut of 16 per cent salt water, which contained approximately 1,000 grains of salt per gallon. The well was finished with a 4¾-in. drillable liner containing 76 ft. of perforated using 100-mesh. Preparations are under way to run a water witch in an effort to determine the source of the salt water which may possibly be coming from the bottom of the hole as the result of defective plug.

In the Ten Section field of Kern County, the first of a group of fields found in the center of the San Joaquin Basin by seismograph surveys, Shell Oil Co. completed No. 38-21-B Kern County Land Co. in Section 21-30-26 flowing 758 bbl. of 33.1-gravity oil cutting 5 per cent and 540,000 cu. ft. of gas daily from the Stevens sand with bottom of the hole at 8,204 ft. This well is expected to be followed into production by No. 38-20-A Kern County Land in Section 20-30-26, which has been finished and is ready for a production test at 8,210 ft.

Rio Bravo

Superior Oil Co., in the Rio Bravo field, completed No. 3 Burner in Section 27-28-25, flowing 1,470 bbl. of 38.9-gravity oil and 2,080,000 cu. ft. of gas daily from the Rio Bravo zone with bottom of the hole at 11,410 ft. This new well, which topped the productive Rio Bravo zone at 11,160 ft. and cored top of the lower Rio Bravo sand at 11,249 ft., was finished with 267 ft. of drillable 5¾-in. liner which contained 120-mesh perforations at 11,163-11,410 ft. General Petroleum Corp.'s No. 5 Caldwell in Section 35-28-25 is drilling below 1,000 ft. Superior's No. 2 Roe in Section 27-28-25 is scheduled to begin making hole within a few days. Union Oil Co., discoverer of the Rio Bravo field of Kern County, has three wells under way on Kern County Land property in Section 34-28-25 and should have No. 45-34 tanking oil within 10 days.

Montebello

The Montebello field of Los Angeles Basin failed to yield any new wells this week, but deepening work resulted in the recompletion of three former upper-zone producers that had been deepened to La Merced zone and the new 8-3 zone. In the far west end of the Montebello extension Standard Oil Co. recompleted No. 7 Braun after deepening from 7,645 ft. to 7,797 ft., flowing 1,580 bbl. of 35.1-gravity oil and 2,500,000 cu. ft. of gas daily through open line. It is producing from all zones from the seventh down through La Merced. Production is coming through 262 ft. of perforations in the 4¾-in. liner at 7,381-7,643 ft. and through 236

(Continued on Page 77)

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Among the Drilling

A. K. STEETERS, drilling contractor, Kilgore, Tex., is clearing location and preparing to move in materials for a test to be drilled for A. C. McGahhey of Tyler, Tex., in Upshur County, eastern Texas. The test is No. 1 M. A. Conner, located in the southwest corner of a 417-acre tract, A. Butler Survey, 3 miles north of Ore City. Contracted to 4,500 ft., it will test the Georgetown lime.

GUY ANDERSON, drilling contractor, Coleman, Tex., received a contract for a wildcat test in northern Mitchell County, West Texas. The wildcat is in an area where four other tests are either drilling or preparing to drill, all seeking the Ira pay found several miles north and in the Ira field of southern Scurry County. The new test is for Dockery & Robbins and will be their No. 1 Mrs. Caroline G. Crawford, 330 ft. from the south and west lines of C. A. O'Keefe Sublivision 13, George J. Reiger Survey.

PRICE BROTHERS Drilling Co., Electra, Tex., was awarded contract for a 6,000-ft. wildcat in Wilbarger County, North Texas. It will be drilled for Herbert Oil Co., Fort Worth, and will be No. 1 C. B. Peters, SW cor. Section 1, B.B.B.&C. Survey. Located on a block of 3,500 acres, the test is about 7 miles southwest of the present drilling Amerada Petroleum Corp.'s No. 1 Goodpasture, Section 35, Block 15, H.&T.C. Survey. The No. 1 Goodpasture has indicated several pay zones and was last reported drilling ahead below 6,100 ft.

REICHMAN & WILLIAMS, drilling firm in Southeast New Mexico, spudded and is drilling below 100 ft. at a wildcat test in southeastern Lea County, New Mexico. It is Stanley Weiner and associates' No. 1 Saunders, located in Section 20-21s-38e.

OSAGE Drilling Co. is drilling three wells in Yoakum County, Texas: No. 3 Walker, drilling below 4,660 ft. in lime; No. 5 Elliott, cleaning out and completing at 5,240 ft.; and No. 1 Nelson, drilling below 4,850 ft., in lime.

BREWER Drilling Co., Artesia, N. M., signed a contract with Leo R. Manning for the development of 15 tracts of 40 acres each in the Manning extension area to the Loco Hills field of Eddy County, New Mexico. Several months ago the No. 1 McClay was completed for a new area opener several miles southeast of the main body of the Loco Hills field. The contractor has spudded and is drilling ahead at No. 2 McClay, located in the NE NE NE Section 18-18s-30e, about 1⅛ miles west of the discovery well. The majority of acreage to be developed lies in Sections 21 and 22.

TRINITY Drillers, Inc., opened an important discovery in Jackson County, Texas, which is expected to lead to an extensive drilling campaign. Drilling for Wellington Oil Co. in the Lolita area, No. 1 L. Ranch Co. was completed for an initial production of 112 bbl. in 8 hours flowing through a ⅛-in. choke. The well was drilled to a total depth of 5,938 ft., and was completed in the Frio sand at 5,933-37 ft. The rig is being moved to the company's No. 2 L. Ranch Co., and other drilling contractors are expected to move rigs to the area following the staking of several locations by various companies.

CROSBY Drilling Co. has apparently opened a new pool in the Blessing area, Matagorda County, Texas, for Texas Co. as No. 1 Pierce tested 300-lb. working pressure and 200 ft. of distillate on a 7-minute drill-stem test at 7,914-31 ft. The well is coring in search of deeper sands. The well is located about 2 miles southwest of Blessing in the H.&G.N. Survey 1. In Calhoun County, Ray N. Ranger's No. 1 W. R. Sells, a projected 9,000-ft. wildcat located near the town of Oliva, was spudded.

ALLEN & MORRIS are rigging up in the Bruni field, Webb County, Texas, for American Liberty Oil Co., and Tide Water Associated Oil Co.'s No. 8 Bruni, a projected Tertiary Wilcox test. In Calhoun County, Texas preparations are being made to test Coronado Corp.'s No. 1 J. J. Welder. Three rigs are located in Nueces Bay offshore from the East White Point field for W. R. R. Oil Co. and Sinclair Prairie Oil Co., while at the La Rosa field, Refugio County, one rotary is running for Coronado Corp. and two other operations are reported at the West Ranch and Agua Dulce fields in Jackson and Nueces County for American Liberty Oil Co. and Agua Dulce Oil Co.

HOUSH & THOMPSON completed another producer for the Gulf Refining Co. at the Eola field, Avoyelles Parish, Louisiana, and the rig is being moved to another location. One operation is reported in San Jacinto County, Tex., for Harrison & Aber-

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crombie, while at the Greens Lake and Orange fields, two rigs are running for Sun Oil Co. and Gulf Oil Corp.

MARTIN THOMPSON Drilling Co. is moving in a rig to the Spanish Camp gas field, Texas, for the company's No. 1 Northington in the S. F. Austin Survey 3.

ROWAN Drilling Co.'s joint wildcat operation with Nichols Oil Co. in the Liverpool area, Brazoria County, Texas, looms as a possible discovery as the result of a drill-stem test at 9,107-34 ft., which recovered 128 ft. of mud and distillate and working pressure built up to 550 lb. In the Venice field, Plaquemines Parish, Louisiana, another producer was completed for Tide Water Associated Oil Co. and the rig is being moved to a new location.

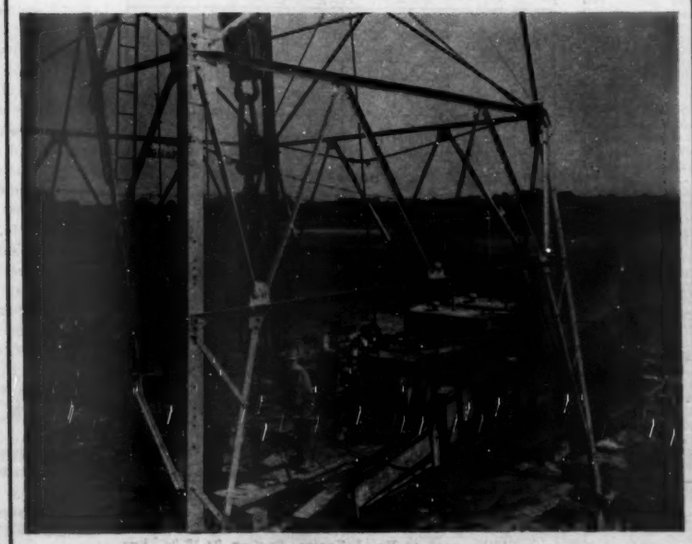
CHRISTIAN-CARPENTER Drilling Co. logged encouraging showings in Joyce Richardson's No. 1 E. Marks, a wildcat located in the Ogburn area, Harris County, Texas, and drill-stem testing showed favorable results. Another rig is running in the Cypress area, Harris County, for the company's joint wildcat test with John Mayo on the L. M. Josey lease in the J. C. Anderson Survey.

KIRKPATRICK Drilling Co. has moved a rig to Jackson County, Texas, for the company's joint wildcat test with John Mayo. The well is located on the J. H. Tucker lease, about 1 mile northwest of the West Ranch field. Contract depth is 7,000 ft.

OLSON Drilling Co. is drilling No. 1 Scritchfield in NW NE SE Section 24-14-3w, southwest of the Vaneck discovery in the South Britton pool, in Oklahoma County, Oklahoma, at total depth of 6,765 ft. in sand, was estimated at 100 bbl. of oil daily and moving in pump equipment. The well is being drilled for Olson Oil Co. and others.

KERLYN Oil Co., Oklahoma City, reports progress on two important wildcats. Its No. 1 Cavanaugh, C W½ SW NW Section 1-15-4w, is drilling below 5,840 ft. and its No. 1 Logan, NE NE NE Section 26-5-6, Pontotoc County, Oklahoma, was waiting on cemented 5-in. casing at 1,860 ft.; the latter test topped Gilcrease series at 1,828 ft., sand 1,860 ft., cored show in Gilcrease, total depth of 2,007 ft., plugged back 1,901 ft.

PORTABLE Drilling Co., Tulsa, had indications that it would be the owner of the second well in the new Perkins field in Lincoln County, Oklahoma, when its No. 1 Bain, SE SW NW Section 24-17-2, had a good show of oil in the Hunton lime at 4,500 ft. Portable took over the discovery well, No. 1 Teeter, NW NW SW Section 24-17-2, from H. J. Conheim and others after the Wilcox sand had been found dry. Test of the upper horizons resulted in completion of the well for 591 bbl.



A diesel rig operated in Illinois by Taylor Drilling Co. This contracting concern introduced the first rotary using internal-combustion engines to Illinois fields in January 1937, and has since drilled 750 Illinois wells. At present it operates nine rigs

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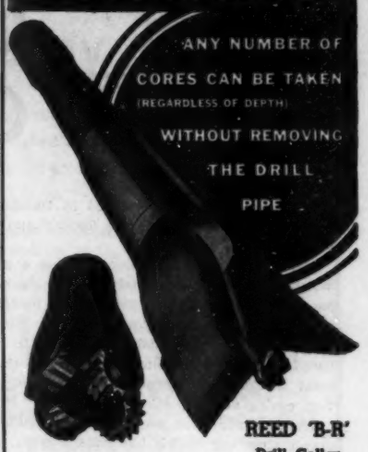

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Oklahoma Operations

By
DAL DALRYMPLE

Open Pool in Noble County; Creek Wildcat Finds Oil Pay

Two new pools were opened in Oklahoma the past week, one in northern Noble County and the other in Creek County.

Northeastern Noble County gained a new Simpson-Wilcox pool Saturday at Helmerich & Payne and others' No. 1 Lucy Fireshaker, SE SE NE Section 11-24-3, 5 miles northeast of the town of Ford. Simpson-Wilcox sand was topped at 3,960 ft., drilled to 3,969 ft. and cored at 3,969-74 ft., total depth, recovering sand with good saturation. Operations were shut down to set 7-in. casing at 3,949 ft.

The discovery well was drilled on a reflection-seismograph structure which indicated 150 ft. of closure in Sections 11 and 12. Location is a diagonal northwest offset to the Texas Co.'s No. 1 Buffalohead, NW NW SW Section 12-24-3, completed in 1923 for an initial of 71 bbl. of oil daily. This well produced a total of 28,700 bbl. of oil before being abandoned. The Buffalohead well topped Wilcox sand at 3,689 ft.

In Creek County a new pool was opened when Indo Oil Co.'s No. 1 Slick estate, NW cor. of Section 1-16-9, topped the Dutcher sand at 2,919 ft., filling 1,600 ft. with green oil. The well was shut down to erect storage tanks preparatory to testing. Location is three-fourths of a mile west of the nearest well of McAdams and Thornton and 2 miles from the town of Heyburn.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ended June 1 and for the preceding week was as follows:

	Barrels	
	June 1	May 25
Allen	5,350	5,400
Billings	5,950	6,000
Burbank	7,050	7,000
South Burbank	8,500	8,500
Balance Osage	17,100	17,250
Blackwell district	3,600	3,650
Bristow-Slick	5,950	6,000
Chandler	1,125	1,150
Crescent	2,100	2,150
Cromwell	2,950	2,950
Cushing-Shamrock	9,350	9,350
Duncan	3,700	3,725
Edmond	4,350	4,400
Fish	3,275	3,300
Fitts	17,000	16,900
Jesse	2,375	2,300
Graham-Fox	2,225	2,250
Gray	750	775
Healdton	8,850	8,900
Hewitt	3,900	3,800
Keokuk	3,050	3,100
Konawa	1,150	1,150
Lucien	7,950	8,000
Moore	2,100	2,125
Northeastern counties	17,000	17,250
Oklahoma City	97,850	99,600
Olympic	2,150	2,150
Ramsey	3,800	3,800
Sasakwa	1,550	1,550
Sholem-Alechem	2,825	2,850
Seminole district:		
Bowlegs	6,900	6,900
Carr City	2,350	2,350
Dora	2,150	2,150
Earlsboro	4,250	4,250
South Earlsboro	550	550
East Earlsboro	2,075	2,100
Little River	6,700	6,650
East Little River	675	675
Maud	550	550
Mission	1,275	1,275
Seminole	7,250	7,300
East Seminole	1,150	1,150
Searight	2,100	2,125
Total Seminole	37,975	38,025
St. Louis-Pearson	29,000	29,150
Tatums-Tussy	2,250	2,300
Tonkawa-Garber-Thomas	4,000	4,050
Wewoka	1,775	1,750
Yale-Jennings	3,500	3,550
Other pools	84,875	87,325
Total Oklahoma	418,250	423,475

Wildcat Operations

Kerlyn Oil Co.'s No. 1 Logan, NE cor. of Section 26-5-6, 1½ miles west of Francis in Pontotoc County, had considerable gas on drill-stem test and promised to open a small gas field. The well was drilled to 2,007 ft., plugged back to 1,900 ft.; 5½-in. casing was cemented at 1,859 ft. Same operators were starting work at No. 1 Chism, SE cor. of Section 24-5-6, to explore the same horizon.

Tabor-Coleman's No. 1 McKinley, C E½ SE SW Section 11-10-4, Pottawatomie County, found Hunton at 4,847 ft., Wilcox at 4,993 ft., second Wilcox at 5,081 ft.; recovered white dry sand at 5,088 ft., total depth and was abandoned.

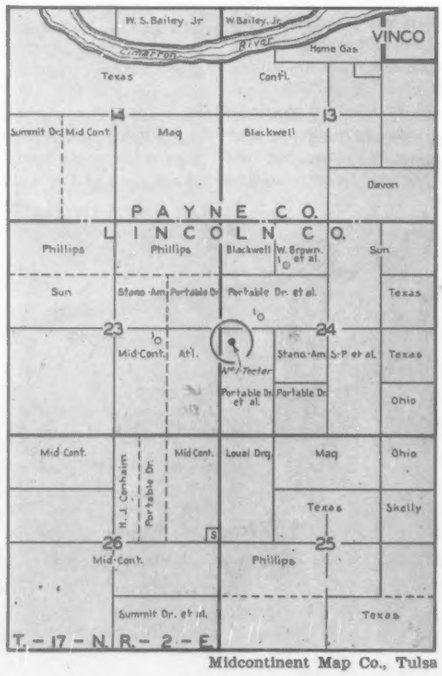
Senora Oil Co.'s No. 1 Cotton, SW SE SW Section 13-5-4, Pontotoc County, recovered 8 ft. of lime in coring from 2,559-68 ft., with no shows, and was dry and abandoned.

Alma Oil Co.'s No. 1 Harrington, NW SE NW Section 24-9-4, Pottawatomie County, flowed 75 bbl. of 38-gravity oil daily. Hunton was topped to 4,210 ft. and the Viola at 4,354 ft.

In Oklahoma County, Jenkins' No. 1 Whitehead, NE cor. of Section 3-1s-13w, had water in sand at 496-505 ft., total depth, and was abandoned.

Phillips Petroleum Co.'s No. 1 Blankenship, C SW NW Section 33-10-13, northwest part of McIntosh County, was dry and abandoned at 3,911 ft.

Alma Oil Co.'s No. 1 Gosting, SE SE SE Section 14-27-2, Kay County, was moving in material; Gene Burke's No. 1 Morganson, NW SW Section 6-2-16w, Kiowa County, was drilling below 300 ft.; Wilson's No. 1 Deimer, NE NW SW Section 28-27-1w, Kay County, was a rig; Walker's No. 1 Hawthorne, SW SW SE Section 19-7-10, Hughes County, was running casing at 415 ft. Droppleman's No. 1 Keyes, NE SE Section 4-11-8, Seminole County, was a rig; Selby Oil & Gas Co.'s No. 1 Camp, SW NE Section 25-11-8, Okfuskee County, location.



Midcontinent Map Co., Tulsa

Twenty-acre spacing for the Perkins pool, Lincoln County, is being opposed by royalty owners and citizens of the town of Perkins. Portable Drilling Co., which opened the pool at No. 1 Tester, Section 24-17-2e, has applied for a Corporation Commission order authorizing 20-acre spacing in the east half of Section 23 and all of Section 24-17-2e

Pontotoc County

Harwell's No. 1 Summers, SW SE SE Section 26-5-4, Beebe field, topped Viola at 2,456 ft., had total depth at 2,626 ft., was acidized and pumped 260 bbl. of oil per day.

Same company's No. 2 Summers, NE SE SE Section 26-5-4, found Viola at 2,490 ft., and pumped 225 bbl. of oil daily. Total depth was 2,600 ft.

Pine's No. 5 Randall, NE NW NW Section 35-5-4, was a rig.

Creek County

McAdams' No. 2-A McMahon, SE NE SE Section 36-17-9, West Walker pool, found Bartlesville sand at 2,340-2,430 ft., was bottomed at 2,762 ft. and pumped 43 bbl. of oil per day.

Link's No. 6 Mickey, NW SW Section 33-18-7, Cushing field, found the Jones sand at 1,638-60 ft., received no shows and was dry and abandoned at total depth of 1,690 ft.

Sidwell's No. 3 Mans, SW SW Section 25-19-8, in the Mannford district, encountered water in Bartlesville sand at 2,508-94 ft., and was abandoned.

Bryan's No. 4 Sickafoose, CWL NE NE Section 23-20-9, Keystone district, pumped 25 bbl. of oil daily from pay sand at 1,211-43 ft. Total depth was 1,249 ft.

Brauer's No. 1 Any, C SE SW Section 31-16-7, was completed for 6,000,000 cu. ft. of gas per day from sand at 1,096-1,114 ft., total depth.

Stone Hill Drilling Co.'s No. 1 Cheatem-Kelly, NE NW SW Section 22-17-8, topped Prue sand at 2,294-2,346 ft., total depth, and pumped 18 bbl. of oil and 6 bbl. of water per day.

New work reported in Creek County: Standard Drilling Co.'s No. 1 Wright, SW NW SW Section 25-17-10, running casing at 2,210 ft.; Beal's No. 2 fee, NE NW NE Section 36-14-9, location.

Payne County

Mid-Continent Petroleum Corp.'s No. 1 Johnson, C W½ SW SE Section 2-17-1, flowed 848 bbl. of oil in 24 hours from Viola at 4,866 ft. Total depth was 4,965 ft.

Texas Co.'s No. 3 Minnick, C W½ NW NE Section 11-17-1, found pay in the Wilcox topped at 4,900-52 ft. and flowed 230 bbl. of oil per day.

Blackwell's No. 2 Shannon, NE SE SW Section 24-18-4, pumped 7 bbl. of oil in 24 hours from Oswego at 2,898 ft. Total depth was 2,991 ft. in shale.

Miscellaneous completions and new work reported for the week were:

Pace and others' No. 1 Weiss, NW SW NE Section 36-10-4, Pottawatomie County, topped Dense at 4,378 ft., was bottomed at 4,448 ft., plugged back to 4,418 ft. and pumped 37 bbl. of oil daily.

Titus' No. 1 Berryman, NW SW Section 25-11-8, Okfuskee County, was drilled to the Booch sand at 3,088 ft., set 7-in. at 3,090 ft. and flowed 150 bbl. of oil in 24 hours.

In Stephens County, Pace's No. 2-A Dierks, NE NW NW Section 13-2s-8w, was dry and abandoned at total depth of 2,168 ft.

Smith's No. 1 Hill, C N½ NE NE Section 10-8-4, Pottawatomie County, drilled Wilcox from 4,420-27 ft., total depth, the hole filled with water and was abandoned.

Tomlinson's No. 1-A fee, NE NW SE Section 16-4s-3w, was bottomed at 1,110 ft. and pumped 7 bbl. of oil per day.

Continental Oil Co.'s No. 1 Walkingsky, C SE SE Section 18-25-2, Kay County, found production in the Mississippi topped at 3,802 ft. and flowed 30 bbl. of oil per day. Total sand depth was 3,896 ft.

Central Petroleum Co.'s No. 2 Graham, SW NE Section 12-1-5w, Stephens County, was drilled to total depth

of 6,005 ft. Perforations were made from 5,291-5,745 ft. and after acid treatment the well flowed 100 bbl. of oil in 24 hours.

Brewer's No. 13 Cotton, NE SW Section 6-20-8, Pawnee County, encountered water in the Arbuckle at 2,672-2,725 ft., plugged back to 2,571 ft., but was dry and abandoned.

Sinclair Prairie Oil Co.'s No. 4-A Pooler, SE NE Section 22-5-8w, Gradys County, was completed for 57,000,000 cu. ft. of gas daily. Total depth was 4,073 ft. Shut-in pressure was 1,860 lb.

Phillips Petroleum Co.'s No. 1 Fletcher, SE NW Section 34-6-10w, Caddo County, had water in the hole at total depth of 3,848 ft. and was abandoned.

Magnolia Petroleum Co.'s No. 15 McKenna, CNL SE SE Section 11-5-9w, Caddo County, was a location; Ohio Oil Co.'s No. 8 Lackey, SW SE NW Section 11-5-9w, Oklahoma County, rigging up rotary; Indian Territory Illuminating Oil Co.'s No. 10 Bodine, NW NE SE Section 24-11-3w, location; McMann's No. 8 Durkee, NE SW SE Section 2-10-11, Okfuskee County, location; Iglehart's No. 1 Hildebrand, NE NW Section 19-10-11, had rig on the ground; Texas Co.'s No. 1 Vaughn, C E½ SE SW Section 2-17-1, Payne County, location; Mid-Continent Petroleum Corp.'s No. 1 Kint, NE NW SE Section 23-17-2, rig.

West Texas Fields

(Continued from Page 69)

ago, but a correction has been made, which puts the well 1,540 ft. from the south line and 220 ft. from the west line of Section 99, B.B.B.&C. Survey. Contracted to 1,250 ft., it will start at once.

Eastland County's wildcat, announced last week, is preparing to spud. It is Jones & Stasney and Groover & Rose's No. 1 McElreath, SW Section 104, Block 3, H.&T.C. Survey. It will test all horizons to a depth of 3,500 ft.

In Jones County and first announced about 2 weeks ago, J. C. Hunter's No. 1 W. Z. Bettles, 2,150 ft. from the south line and 467 ft. from the east line of Section 1, T. C. Survey, found saturation in the Palo Pinto lime. The location is about 1 mile south of the one-well Pardue field, opened several months ago by K. B. Nowels' No. 1 Pardue. No. 1 Bettles drilled saturated lime at 3,458-63 ft. and a drill-stem test showed oil and gas-cut mud. The well is 18 ft. lower, structurally, than the discovery well.

Parker County registered a new operation during the week when C. Leidecker and William Holland staked No. 1 J. A. Boyd, NE NE of south 100 acres of the A. J. Edwards Survey. Machinery is being moved in for a 4,500-ft. test.

WEST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Brown County

In the Grosvenor field McDonald & Campbell's No. 5 Hill, abandoned location.

Callahan County

In the Putnam field Heist's No. 1 Isenhower, dry and abandoned at total depth of 275 ft. Stutenroth's No. 1 Norton, dry and abandoned at total depth of 660 ft. Jackson's No. 1 Williams, dry and abandoned at total depth of 592 ft.

Haskell County

In the Pardue field S. B. Roberts' No. 1 Pardue, slight show oil at 3,384-92 ft., dry and abandoned at total depth 3,396 ft.

Jones County

In the Noodle Creek field Butler-Horne Drilling Co.'s No. 2 Thompson, 2,379-82 ft., 150 bbl.

Shackelford County

In the Ghio field Georgian Oil Corp.'s No. 17 Black, 532-38 ft., 5 bbl. In the Albany field Hart's No. 6 Sanders, dry and abandoned at total depth of 640 bbl. In the Sedwick field Roark & Hooker's No. 1 Hatcher, dry and abandoned at total depth of 717 ft.

TEXAS PANHANDLE COMPLETIONS

(24-hour gages)

Gray County

Indian Territory Illuminating Oil Co.'s No. 13 Smith, 3,147-3,269 ft., 342 bbl. Moran's No. 4 Skidmore, 3,130-3,288 ft., 336 bbl.

Hutch'nson Coun'y

Crosbie's No. 30 Pitts, 2,829-2,935 ft., 395 bbl. Barnsdall Oil Co.'s No. 10-B Lewis, 2,930-3,023 ft., 821 bbl. McIlroy Oil Co.'s No. 14 Haile, 2,995-3,045 ft., 23 bbl. oil, naturally. J. R. Phillips' No. 1 McCloy, 3,240-75 ft., 10 bbl. oil and 100 bbl. water. Phillips Petroleum Co.'s No. 2 Minnie Byrd, 2,836-3,025 ft., 5,200,000 cu. ft. of gas. Stekoll Oil Co.'s No. 10 Whittenburg B, 2,990-3,059 ft., 50 bbl. Stekoll Oil Co.'s No. 6 Whittenburg M, 2,935-91 ft., 35 bbl.

Wheeler County

Elbar Oil Co.'s No. 15 Noel, 2,417-35 ft., 144 bbl.

California Fields

(Continued from Page 73)

ft. of 2½-in. drill pipe with perforations at 7,523-7,759 ft. Standard Oil Co., deepening No. 1 Kaufman fee, is drilling at 7,860 ft. Standard bought this property a number of years ago as the site for shipping tanks from the field and for several years utilized the acreage for that specific purpose. Upon the development of deeper production, however, several wells were drilled on the parcel and they proved to be good producers.

Kern Oil Co., discoverer of deep production in the west end of the Montebello structure, recompleted No. 5 Mulholland, flowing 404 bbl. of 34.5-gravity oil and 2,269,000 cu. ft. of gas per day from the seventh and eighth zones with bottom of the hole at 7,770 ft. It flowed through two ¾-in. beans but was pinched back after completion. Production is coming through 94 ft. of perforations in the 5-in. at 7,547-7,641 ft. and through 132 ft. of perforations in a 3½-in. liner at 7,638-7,770 ft. The 7,598 ft. of 2½-in. tubing has a packer at 7,521 ft. McVicar & Rood, pioneer operators in the Montebello extension, recompleted No. 2 Manz, flowing 370 bbl. of 45.1-gravity oil and 2,290,000 cu. ft. of gas per day after deepening from 7,630 ft. to 7,760 ft. No. 2 Manz, which is north of Maple and Beverly boulevards is producing from 259 ft. of formation as the 6⅝-in. liner is perforated at 7,495-7,630 ft. and the 4¾-in. secondary liner is perforated at 7,630-7,760 ft.

Rosecrans

Operators interested in the Rosecrans field of Los Angeles Basin received a surprise when St. Anthony Oil Co. completed No. 3 Gordon flowing 2,400 bbl. of 31.2-gravity oil and 2,500,000 cu. ft. of gas per day from the O'Dea zone with bottom of the hole at 7,740 ft. This is one of the best wells finished to date in the southern extension of the Rosecrans field and will stimulate interest and result in the drilling of additional wells in the immediate area. Top of the first oil sand was cored at 7,254 ft., but this upper showing is not producing as the shoe of the 7-in. water string was cemented below the zone at 7,314 ft. It is producing from 406 ft. of formation as the 5-in. liner is perforated at 7,332-7,738 ft.

Howard Oil Co. finished a relatively small well in the south Rosecrans district this week as No. 2 H.O. was good for only 125 bbl. of 31.1-gravity oil, cutting 5 per cent, under a natural flow from the O'Dea zone with bottom of the hole at 7,650 ft. It proved a disappointment as it is producing from 426 ft. of formation and was expected to shown a larger initial. Chicago Oil Co. is completing No. 1 Founders.

Los Angeles Basin

R. E. Havenstrite completed another good well, No. 3, on the Larronde lease in the extreme western end of the Dominguez field, but its initial indicates that the edge of the field is not far removed. No. 3 was brought in flowing 760 bbl. of 31.5-gravity oil cutting 5 per cent and 1,350,000 cu. ft. of gas daily from the eighth Callender zone with bottom of the hole at 7,542 ft. This new well has a 7-in. water string cemented at 7,015 ft. and production is coming through 527 ft. of perforations. Top of the seventh Callender zone was cored at 7,020 ft.

In the Seal Beach field of Orange County Continen-

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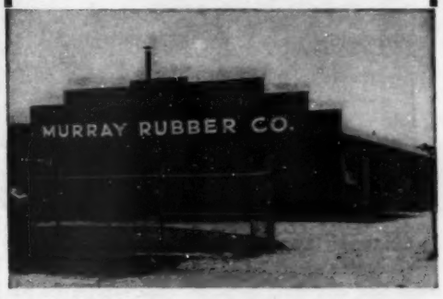

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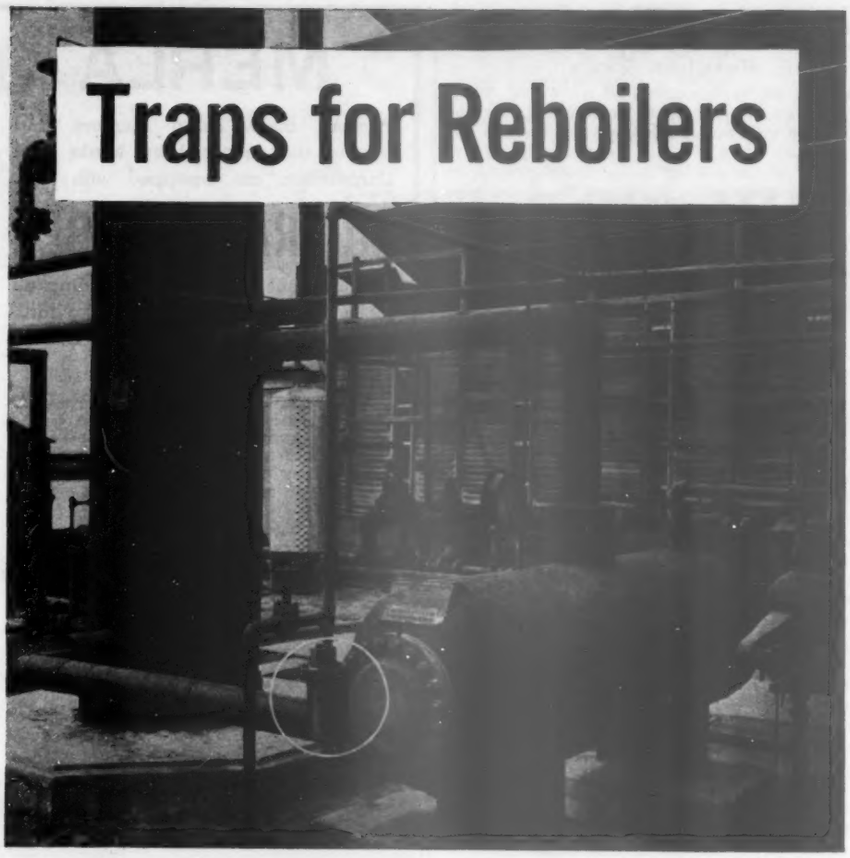

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tal Oil Co. completed No. 43 Bixby flowing 950 bbl. of 24.2-gravity oil and 800,000 cu. ft. of gas per day from the top 10 ft. of the Bixby zone. The well was drilled to 4,393 ft., and an 8⅝-in. water string cemented at 4,383 ft., after which 25 ft. of gravel-packed 5-in. liner was run in and landed on bottom.

One new well was recorded in the Wilmington field of Los Angeles Basin but next week's completion list should be larger as there are a number of wells standing cemented in or on top of the pay. The new well was No. 12-W of Long Beach Oil Development Co., flowing 115 bbl. of 20.3-gravity oil from the upper Terminal zone and 114 bbl. of 25.4-gravity oil daily from the lower Terminal zone. It was drilled down to 3,948 ft., but was plugged back to 3,913 ft. An 8⅝-in. liner landed at 3,910 ft. carried perforations opposite the upper and lower Terminal zones at 2,530-2,825 ft., 2,985-3,525 ft., 3,540-95 ft., and at 3,725-3,910 ft.

One new well and two recompletions were put on production in the Long Beach field during the week, but none showed large production. The new well was No. 3 Exchange of Cal-Mac Oil Co., pumping 140 bbl. of 25.3-gravity oil cutting 5 per cent daily from the upper zone at 3,365 ft. This well is producing from 80 ft. of formation. No. 2 Dolley of Atlantic Oil Co., at Twenty-fifth and Lewis streets, was recompleted, pumping 124 bbl. of 24.6-gravity oil, cutting 4 per cent, from 3,420 ft. This well is producing from 120 ft. of formation but the zone is rather badly depleted and exhausted. In the northwest end of the Long Beach field Hilldon Oil Co. successfully recompleted No. 2 Flood Control, pumping 185 bbl. daily from 4,591 ft. after the hole had been deepened from 4,181 ft. The hole was finished with 560 ft. of blank 6⅝-in. liner, which was cemented at 4,590 ft. and then gun-perforated at 4,440-74 ft. and at 4,497-4,520 ft.

San Joaquin Valley

Shell Oil Co. completed an excellent well in the Strand field of Kern County this week when No. 86-12-B Kern County Land in Section 12-30-25 was brought in flowing 2,560 bbl. of 33.4-gravity oil and 1,695,000 cu. ft. of gas daily from the Stevens sand with bottom of the hole at 8,499 ft. This new well, which is in the southwest end of the Strand field, is producing exclusively from the lower Stevens sand, which was cored at 8,480 ft.

Kenda completed a good well in the Kettleman North Dome field when No. 4-16-Q in Section 16-22-18 was finished, flowing 894 bbl. of clean 35.3-gravity oil and 426,000 cu. ft. of gas per day from the Temblor with bottom of the hole at 8,250 ft. This new well was finished with 1,227 ft. of 6⅝-in. liner that was perforated at intervals between 7,419 ft. and 8,225 ft. The liner was cemented through perforations at 7,408 ft., 7,685 ft., 7,780 ft., and at 8,140 ft.

Monterey Exploration Co. completed a small well in the Edison field of Kern County when No. 15 Shell-Duff in Section 15-30-29 was brought in pumping 72 bbl. of 15.4-gravity oil cutting 25 per cent daily from 1,731 ft. The well is producing from 80 ft. of formation although only 74 ft. consisted of oil sand.

In the Mount Poso field of Kern County Bishop Oil Co.'s No. 3 Buchner in Section 20-26-28 was completed pumping 77 bbl. of 15.2-gravity oil per day from 1,605 ft. Top of the productive Vedder sand was cored at 1,590 ft., which gives 15 ft. of oil sand from which to produce. Franco Western Oil Co., on the McKittrick front in the McKittrick field of Kern County, completed No. 19 Front in Section 8-30-22, pumping 125 bbl. of 16.3-gravity oil daily from 981 ft. The well is producing from 42 ft. of formation open opposite perforations at 916-58 ft.

Coastal District

Continental Oil Co., in the San Miguelito field of Ventura County, completed No. 16 Grubb, flowing 2,090 bbl. of 28.6-gravity oil and 1,655,000 cu. ft. of gas daily from a depth of 6,610 ft. The hole was finished with 1,250 ft. of 5-in. liner, which was perforated at intervals between 5,400 ft. and 6,610 ft. In the Ventura Avenue field, immediately east of the San Miguelito field and on the same general anticline, Shell Oil Co. completed another good well on the Taylor property when No. 116 was brought in flowing 2,559 bbl. of 30.6-gravity oil and 2,866,000 cu. ft. of gas daily from a depth of 7,520 ft. General Petroleum Corp. has started rig construction for No. 19 Barnard, the first new well which the company has started in the Ventura Avenue field in 2 years.

Hope Gets Good Gas Well in Catskill Section, Devonian

By STAFF CORRESPONDENT

PITTSBURGH, Pa., June 3.—In Wetzel County, West Virginia, a fairly large gas well for the Catskill section of the Upper Devonian was completed by Hope Natural Gas Co. on the William Shafer farm in the Proctor district. In the Gordon sand at 2,915 ft., the volume of gas was gaged at 8,000,000 cu. ft. a day. There have been other fair wells in the district but this is the largest from that formation.

SOUTHEAST OHIO

The best producer for the week was a test in Section 9, Clayton Township, Perry County, Ohio, completed by Davis and others on the Maddox heirs farm in Clinton sand at a total depth of 3,275 ft. It produced 30 bbl. the first 14 hours after shot. In Section 17 of the same township B. G. Davis and others completed No. 3 Beacham in Clinton sand at 3,260 ft., which produced 10 bbl. the first 18 hours after shot.

In Meigs County Roush Brothers completed a well on the Salser farm, Lot 286, Section 30, Sutton Township, in first Brea at 1,728 ft. It produced 2 bbl. the first day after shot along with a daily volume of 10,000 cu. ft. of gas. In Lot 291 Joe Rubin drilled a wildcat on the Thomas Snowball No. 2 lease through the sand into shale at 2,990 ft. It was dry.

In the shallow sands of Medina County, where an extensive water-flooding program is under way, R. C. Holmes and others completed six input wells on the A. B. and Mary Hostetler farm, Tract 14, Lot 1, Chatham Township.

SOUTHWEST PENNSYLVANIA

Completions in Southwest Pennsylvania consisted of two gas wells and one dry hole. In Boggs Township, Armstrong County, Humphrey-Stone-McCall Corp.'s test on the Heffelfinger farm in Boggs Township bottomed at 1,448 ft., Hundred-foot sand, gaged 280,000 cu. ft. a day.

In Cowanshannock Township, Armstrong County, Peoples Natural Gas Co. is drilling at 1,860 ft. in No. 2 Lee Bell and Equitable Gas Co. will deepen No. 3 G. W. Smeltzer. In Kittanning Township H. C. Judson and others are drilling at 2,600 ft. in No. 2 W. J. Gray. In Red Bank Township John Wray and others are drilling at 2,200 ft. in No. 1 O. B. Geist, and in Valley Township are drilling on the H. M. Barker farm. In Plum Creek Township, William McCollins has started a second well on the Add Reefer farm. Here the Peoples Natural Gas Co. will deepen the No. 1 John Shetler. In South Buffalo Township W. A. Baker is shut down on the James Bush farm at 2,943 ft.

Clarion-Indiana-Westmoreland

In Monroe Township, Clarion County, Owens Illinois Glass Co. completed a well on the Lena C. Longwell farm at 2,485 ft. It tested 150,000 cu. ft. of gas a day from Sheffield sand, but declined to 80,000 cu. ft. a day. In Porter Township Cottage Hill Gas Co. is drilling on the E. M. Reitz farm at 360 ft.

In Indiana County the T. W. Phillips Gas & Oil Co. is drilling the following: Brush Valley Township, No. 1 George Smolar at 3,204 ft.; Young Township, R. & P. Coal Co. at 3,556 ft.; Washington Township, No. 1 E. B. Brandon at 1,420 ft., and No. 1 Louisa Black at 1,535 ft.; Armstrong Township, No. 1 Mary Ethel Henderson at 2,000 ft., Peoples Natural Gas Co., a location on the Israel Miller farm; J. Cloid Rinn, building a rig for No. 2 Perdon heirs.

In Bell Township, Westmoreland County, Kiski Valley Gas Co. is drilling on the J. F. Wolford farm at 480 ft. In Washington Township Peoples Natural Gas Co. is deepening No. 2 A. J. Idings, starting at 1,486 ft. and has reached 1,775 ft. In Allegheny Township Hyde Park Foundry Co. will deepen No. 1 Andrew Grinder.

Fayette-Greene-Washington

In Menallen Township, Fayette County, Wahler Powers Oil & Gas Co. drilled the test on the Felix Valerio farm through the Fifth sand to 2,618 ft. and it was dry. Here this company is drilling No. 2 Shamrock Farms Co. at 725 ft. In German Township J. H. Carnell is drilling on the Marion Kurzankuski farm at 366 ft. In Nicholson Township Duquesne Gas Co. topped Big Injun sand at 1,277 ft. on the I. Cover farm with 49,000 cu. ft. of gas showing at 1,283-90 ft., which soon exhausted itself. It is now drilling at 1,425 ft.

In Greene County Waynesburg Home Gas Co. has a rig up on the W. A. Elms farm in Wayne Township. In Richhill Township O. I. Dille and others have a rig up on the William Hughes farm. In Morris Township Hiawatha Oil Co. is drilling at 1,510 ft. in No. 1 Young heirs, and Romney Rutan and others are drilling No. 1 John B. Carter at 1,028 ft.

In Center Township, Greene County, J. B. Orndoff is drilling No. 3 Mattie I. Scott at 100 ft. Equitable Gas Co. is deepening No. 1 Jesse Stewart, starting at 2,112 ft., and has reached 2,715 ft. In Greene Township A. V. Lewis and others are down 360 ft. on the Smith & Pethtel lease.

In Amwell Township, Washington County, Arthur Sivers and others have a rig standing on the Frank Lyseck farm. The Equitable Gas Co. is drilling at 1,206 ft. in No. 1 R. Foster. R. W. Clovis and others are drilling No. 2 W. S. McClenathan at 150 ft. In South Franklin Township Foley & Williams are drilling No. 1 J. G. Clark at 920 ft. In Somerset Township the Equitable Gas Co. is drilling a test on the W. W. Wright farm and has reached 360 ft.

(Continued on Page 83)

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Rocky Mountain Area

By

T. R. INGRAM

Dakota Sand Will Be Tried Out Again in Fort Collins

DENVER, Colo., June 3.—Preliminary testing of the Mountain Fuel Supply Co.'s No. 5-A Wilson, in the Hiawatha field in Colorado, showed for around 200 bbl. per day from the third sand. Three sands are to be tested separately.

Lance Creek had one completion in the Continental Oil Co.'s No. 7-B Dielman, which made 1,050 bbl., initially, from the Leo sand.

One small well in Cut Bank and two in Kevin-Sunburst were reported in Montana. The best of these was the Fulton Petroleum Co.'s No. 4 Thompson, which is flowing 250 bbl. per day, after acidizing.

The Continental Oil Co. has begun deepening its second well on the Fort Collins dome in Colorado from the Muddy to the Dakota, a discovery having been made in the last-named sand last winter. The General Petroleum Corp. has spotted another well on Cole Creek which will go to the Shannon sand. Other new operations include one in the Garland field for the Ohio Oil Co., one in Lance Creek, two in the La Barge field in Sublette County, three in Cut Bank, and six in Kevin-Sunburst.

NEW MEXICO

Showings of oil were found during the week at two closely watched tests in the district, one a deep exploratory hole in the Skelly field of Lea County and the other a wildcat in Otero County. Also important were reports of new activity in De Baca County.

In the Skelly field of Lea County, Gulf Oil Corp.'s projected 5,000-ft. test, No. 1 Amanda E. Drinkard, NW SE Section 25-22-37, hit an oil zone during the week but was drilling ahead in lime as the week closed. The zone was topped at 3,794 ft. and drilled to 3,804 ft. At this point a test recovered 5 gal. of oil hourly with slight showings of gas and no water.

R. H. Ernest's No. 1 Ernest Land Co., wildcat test in SE cor. Section 20-25-7, Otero County, logged a slight showing of gas and oil in a brown lime section from 3,180 to 3,204 ft. The shows were streaked and broken. The test was last reported shut down for orders at 3,204 ft.

In the extreme western part of De Baca County, and on the Buchana dome, B. C. Armstrong, R. D. Compton & Sons and others' No. 1 Overton ranch is drilling ahead below 500 ft. The test, 1,980 ft. from the north and west lines of Section 34-2n-21e, is the first of several shallow tests to be drilled by the operators in an attempt to locate the top of the dome. A deep test is reported planned when the limits of the dome are determined. The operators have a block of 25,000 acres in the area.

Eddy County

Sanders Bros.' No. 1 De Temple, NW NW Sec. 27-19-31. Loc.
Bassett & Birney's No. 1 Platt, SW cor. Sec. 26-18-26. Old failure being D.D. below 2,342 ft.; drlg. 2,611 ft.
Max Weathers' No. 1 Flood, SE SE Sec. 24-18-23. Drlg. 1,245 ft.
M. Yates, Jr.'s No. 1 McCall, SW SW Sec. 24-18-26. Drlg. 700 ft.
Jack Harris' No. 1 Josey, SW SE Sec. 19-20-23. S.D.O. 235 ft.
Schumacker's No. 1 Levers, NE NE Sec. 33-16-29. Drlg. 950 ft.
J. B. Mulcock's No. 1 Etz, 660 ft. from S and W lines, Sec. 25-16-30. Drlg. 1,380 ft.
Everts' No. 1 Greer, SE cor. Sec. 31-16-31. P.B. 3,690 ft.; swb. 5 B.O.P.D. for 7 days; tstg.
Everts & Moran's No. 1 Ranuz, NE NW Sec. 18-23-26. T.D. 375 ft.; S.D.; no report.
J. B. Cowden's No. 1 State, SW SE Sec. 3-17-29, between Root field and High Lonesome field. R.U. mach.
G. A. Grober's No. 1 Wright, 1,080 ft. from N and W lines, Sec. 25-18-28. S.O.&G. 1,382 ft.; est. 10 B.O. P.D.; fsg. 2,226 ft.
G. M. Cone's No. 1 Hare, NW NW NE Sec. 14-16-28, 3 mi. W of High Lonesome field. Drlg. 1,695 ft.
Artesia Drlg. Co.'s No. 1 Hoffman, SE SE SE Sec. 14-17-24. Est. 1,250,000 cu. ft. gas at 938 ft.; S.D.R. 1,065 ft.
L. E. Elliott's No. 1 Elliott, SE SE SE Sec. 24-17-29. S.S.O. 3,255-75 ft.; made 1 B.O. and 4 B.W. in 24 hrs.; drlg. 3,845 ft.
Anderson's No. 1 Neeson, 330 ft. from W and 2,310 ft. from N lines, Sec. 4-16-30. S.D.O. 2,925 ft.
Frederick's No. 1 Reed, 1,980 ft. from S and W lines, Sec. 28-24-28. O.W.D.D.; top gas sand 2,891 ft.; est. 2,000,000 cu. ft. gas; casing set at 2,873 ft. and collapsed at 2,200 ft.; recmtd. csg.; W.O.C.
Wilder's No. 1 Young, 1,650 ft. from N and W lines, Sec. 23-16-29. S.G. 1,805 ft.; S.D.O. 3,095 ft.
Sam Montgomery's No. 1 Kaltenbach, 330 ft. from N and W lines, Sec. 24-16-27. S.D.O. 2,243 ft.
Thomas & Bowers' No. 1 H. W. Etz, 2,310 ft. from N and 330 ft. from W lines, Sec. 13-16-30. T.D. 3,744 ft.; 2,000 ft. F.I.H.

Dona Ana County

Picacho O. & G. Co.'s No. 12 Armstrong, Sec. 15-23s-1w. S.D.O. 2,620 ft.
Slack & Mahres' No. 1 Simmons, Sec. 35-22s-5e. T.D. 2,785 ft.; S.D.O.

Chaves County

Farrar-Jones-Cunningham's No. 1 Samples, 330 ft. from S and E lines, Sec. 1-7-27. S.D.R. 98 ft.

Luna County

O. D. Berry's No. 2 Berry, Sec. 33-22-10. S.D.R. 291 ft.

Lea County

Gulf Oil Corp.'s No. 1 Amanda E. Drinkard, NW SE Sec. 25-22-37, in Skelly area, 5,000-ft. test. Drlg. 3,921 ft.; S.S.G. 3,794-3,804 ft.; made 5 gal. oil hourly.
J. D. Barefield's No. 2 Stroup, 1,980 ft. from N and E lines, Sec. 12-18-32. S.D.O. 4,055 ft.; S.S.O. 4,040-50 ft.; 1 baller oil after 2-day shutin.
Stogner & Weiner's No. 1 State, SE SE Sec. 30-12-32. Fsg. 3,385 ft.
Stanley & Weiner's No. 1 Saunders, NE NE Sec. 20-21-38. R.U.R.

Otero County

Ernest's No. 1 Ernest, Sec. 20-25-7. S.D.O. 3,204 ft.; S.S.G. 3,180 ft.
Otero Oil Co.'s No. 1 State, SE NW Sec. 5-22-10. S.D.O. 825 ft.

Socorro County

Joiner Oil Corp.'s No. 1 Belen grant, 2,310 ft. N and W lines, Sec. 16-3-1. S.D.O. 845 ft.

SOUTHEAST NEW MEXICO COMPLETIONS

Eddy County

In the Loco Hills field, Aston & Fair's No. 6-B State, SE NW Section 32-17-30, 2,886-2,893 ft., 46 bbl. hourly through 2-in. tubing after shot. R. W. Fair's No. 8 Brainard, NE NE Section 10-18-29, 2,618-26 ft., 100 bbl. oil with 10 per cent water in 4 hours through 2-in. tubing. Continental Oil Co. and S. P. Yates' No. 5 Brainard, Section 11-18-28, dry and abandoned at total depth of 2,832 ft.

Lea County

In the Vacuum field, Magnolia Petroleum Co.'s No. 63 State-Bridges, NW SE Section 13-17-34, 4,594-4,675 ft., 131 bbl. daily through 30/64-in. choke. Phillips Petroleum Co.'s No. 6 Hale-State, Section 35-17-34, 4,443-4,710 ft., 85 bbl. in 8 hours, pumping.

In the Arrowhead field, Humble Oil & Refining Co.'s No. 2-M State, SW SE Section 18-22-37, 3,625-3,720 ft.; 392 bbl. in 8 hours after acid.

NORTHWEST NEW MEXICO

San Juan County

Continental Oil Co.'s No. 106 Rattlesnake, SW SE SE Sec. 12-29n-19w. Drlg. 873 ft.

COLORADO

El Paso County

F. F. Hintze et al's No. 1 State, CSL SE SE Sec. 16-11s-60w. T.D. 1,340 ft.; landed 8¼-in. at 1,290 ft.; C.O. caves.

Fremont County

John Lippis' No. 1 fee, C.T. in south Florence on farmout from Continental Oil Co., C SW SW Sec. 11-19s-70w. M.I.M.

Larimer County

Continental Oil Co.'s No. 1 Whitaker, Fort Collins field, is rigging up to drill deeper from 4,504 ft. It is a south offset to No. 1 Meyer, which was deepened last fall from the Muddy to the Dakota sand and resulted in a discovery in a deeper horizon. It was completed in 1924 for 800 bbl., initially, from the Muddy at 4,475-4,504 ft. This is a correction in name and location.

Continental Oil Co.'s No. 1 Whitaker, NE NW NW Sec. 30-8n-68w. T.D. 4,504 ft.; R.U. to D.D.

Ed Shogren et al's No. 1 Frazier, SE Sec. 31-4n-69w. S.D. 910 ft.; to change over to C.T.

Moffat County

The Mountain Fuel Supply Co.'s No. 5-A Florence Wilson, in the Hiawatha field, is reported to have started off at around 200 bbl. per day in a test through perforated casing of the third sand in the Wasatch at 2,482-2,522 ft. After completing test, plug will be set and pipe perforated opposite the second sand, the intentions being to test each sand separately.

Mountain Fuel Supply Co.'s No. 2-A Kuykendall, SW NW SW Sec. 23-12n-100w. M.I.M.
Mountain Fuel Supply Co.'s No. 5 Wilson, SW SW NW Sec. 23-12n-100w. Recmtd. 7-in. on bttm. at 2,532 ft.; tstg.
Great Divide Pet. Co.'s No. 1 Wyatt, SE Sec. 4-6n-92w. T.D. 724 ft.; res. C.O.; 10-in. frozen at 650 ft.

Park County

South Park Oil Co.'s No. 1 Leman, NE NE SE Sec. 34-11s-75w. Drlg. 7,251 ft.

Rio Blanco County

The Buford Oil Co.'s No. 1 Government, on the Yellowjacket-Buford structure, is preparing to resume. The crew has gone in to make preparations. It shut down last December for the winter at 4,160 ft. This is a test of formations below the Permian and the outcome will have an important bearing on any decision to explore the deeper pays on the Moffat, Iles, and other structures on the north in Moffat County.

Buford Oil Co.'s No. 1 Govt., C SW SW Sec. 16-1n-91w. T.D. 4,160 ft.; M.I. to res.
Texas Co.-California Co.'s No. 3 Unit, NE NE NE Sec. 27-3n-94w. Drlg. 5,570 ft.

WYOMING

Albany County

Ohio Oil Co.'s No. 1 Coughlin, SW NE NW Sec. 26-16n-77w. Drlg. 4,250 ft.

Big Horn County

The Ohio Oil Co.'s No. 3 Anna Davis, in the Garland field, is building rig. It is a south offset to the Mule Creek Oil Co.'s No. 1 Sessions, which pumped 350 bbl. per day at 4,155 ft., total depth.

Ohio Oil Co.'s No. 3 Davis, NW SW NW Sec. 34-56n-97w. B.R.; (first report).

Carbon County

Sinclair-Wyoming Oil Co.'s No. 14 Unit, NW SW NE Sec. 7-26n-89w. Drlg. 3,399 ft.
MacKinnie Oil & Drlg. Co.'s No. 2 Union Pacific, NE SE NE Sec. 21-22n-78w. Drlg. 817 ft.

Fremont County

Logue Trust Co.'s No. 1 Wisner, Government Draw dist., NE SW Sec. 8-33n-98w. Spdg. 10 ft. in Cody sh.
Sinclair-Wyoming Oil Co.'s No. 12 Unit, SW SE NW Sec. 23-32n-95w. Drlg. 1,880 ft.

Lincoln County

H. C. Harris et al's No. 1 Govt., SE NW NW Sec. 23-21n-117w. Drlg. L. 2,939 ft.
Fontenelle Dev. Co.'s No. 1 Pomroy, NE SW Sec. 5-24n-113w. Drlg. below 1,000 ft.

Natrona County

The General Petroleum Corp. has let contract to Manning & Martin, Inc., for its No. 31-21-G. on the Cole Creek structure to go to the Shannon sand at around 4,500 ft. The location is 1,320 ft. east of No. 1-21-G. the discovery well in that horizon, which was completed 3 weeks ago for 350 bbl. per day after plugging back from deeper horizons. This is the beginning of the exploration of the Shannon sand which is believed to extend over a considerable area.

General Pet. Corp.'s No. 31-21-G, NW NE NW Sec. 21-35n-77w. Loc.; (first report).
Lewis Gebhart's No. 1 Govt., NW NE SE Sec. 10-39n-78w. S.D. 740 ft.; temp.
Continental Oil Co.'s No. 1 McGrath, C NW SW Sec. 15-34n-78w. Drlg. gr. L. in Tensleep-Minnelusa at 8,201 ft.; out of hd. pink sd at 8,200 ft.
Royal Oil Corp.'s No. 1, SW SW SW Sec. 26-35n-80w. Drlg. 205 ft.
Connelly Drlg. Co.'s No. 1 State, SW SW NW Sec. 36-36n-81w. S.D. 1,420 ft.

Niobrara County

The Continental Oil Co.'s No. 7-B Dielman, SE SE NE Section 7-35n-65w, an inside well in Lance Creek, was completed at 5,446 ft., total depth, for 1,050 bbl. the first 24 hours, from the Leo sand at 5,430-46 ft.

The Ohio Oil Co.'s No. 15 Carrie Putnam, an inside well on the north side, is a near completion. It was drilled to 5,541 ft. and showed some water at the bottom. It plugged back to 5,481 ft. and on a preliminary test showed 29 bbl. per hour.

Argo Oil Co.'s No. 7 Ford, SE NW SE Sec. 33-36n-65w. Loc.; (first report).
Minnelusa Oil Corp. and MacKinnie Oil & Drlg. Co.'s No. 11 Thompson, NW SE NW Sec. 7-35n-65w. Drlg. 3,455 ft.
Ohio Oil Co.'s No. 7 Agnes Rohlff, NW NE SE Sec. 32-36n-65w. R.U.R.
A. B. Cobb's No. 1 Novick, SE NE NW Sec. 6-35n-65w. Drlg. 2,405 ft.
Argo Oil Co.'s No. 13-A Elliott, SE NE NW Sec. 5-35n-65w. Drlg. 1,375 ft.; cmtd. 13-in. at 309 ft.
Ohio Oil Co.'s No. 16 Lamb-1, NW NE NE Sec. 5-35n-65w. Drk.; rig; W.O. equip.
Continental Oil Co.'s No. 7 Sam Joss, NW SW NE Sec. 6-35n-65w. Drlg. 3,390 ft.
Continental Oil Co.'s No. 11 Otto Rohlff, SE NE SE Sec. 31-36n-65w. Drlg. 3,206 ft.
Ohio Oil Co.'s No. 14 E. Lamb-Acct. 2, C SW SE Sec. 5-35n-65w. Drlg. 5,204 ft.
Continental Oil Co.'s No. 3 E. Rohlff, SE SW NW Sec. 32-36n-65w. Drlg. 4,483 ft.; T. r.b. 4,238 ft.
Ohio Oil Co.'s No. 16 Putnam, SW SW NW Sec. 4-35n-65w. T.D. 5,529 ft.; P.B. to 5,435 ft. to S.O.W. in sec. Leo sd. at 5,505-79 ft.
Ohio Oil Co.'s No. 15 Carrie Putnam, NW NE SW Sec. 33-36n-65w. T.D. 5,541 ft.; P.B. to 5,481 ft.; tstg.
H. D. Moore's No. 1 Berggren, SE NW Sec. 23-35n-63w. T.D. 2,526 ft.; rng. 4¾-in. for W.S.O.

Park County

Minnelusa Oil Corp.'s No. 1 Roney, SW SW NW Sec. 24-58n-98w. Drlg. 3,303 ft.

Sublette County

Texas Co.'s No. 1-G Govt., NW NW SW Sec. 27-27n-113w. Loc.; (first report).
Marvel Oil Co.'s No. 2-G Govt., CNL NE SE Sec. 28-27n-113w. R.U.C.T.; (first report).
Worth Garretson et al's No. 1, NE NW SE Sec. 28-27n-113w. Drlg. 405 ft.
North La Barge Oil Co.'s No. 3 Govt., SE SE NE Sec. 28-27n-113w. Cmtd. 8⅝-in. on bttm. at 960 ft.

Sweetwater County

Gus Ponglatz et al's No. 1 Clark, C NW NE Sec. 22-19n-104w. R.U.R.
Sinclair-Wyoming Oil Co.'s No. 93-A, SW NW NW Sec. 11-26n-90w. Drlg. 1,996 ft.
Red Desert Corp.'s No. 1 Aspden, NW SW NW Sec. 34-18n-103w. Rig; W.O. equip.
Vermillion Oil Co.'s No. 2 Govt., SW SW SW Sec. 7-12n-99w. Drlg. 2,720 ft.

MONTANA

Glacier County

Cut Bank had one completion, a small well, and three new operations. The Glacier Production Co.'s No. 3 Whetstone, C SE NW Section 8-33n-5w, had the Cut Bank sand at 2,806-52 ft., with the main pay at 2,845-52 ft., and oil rose 225 ft. in the hole. It was shot with 20 qt. at 2,833-53 ft. There was no swabbing test.

Glacier Prod. Co.'s No. 1 Yunck unit, 125 ft. S of CNL Sec. 2-34n-5w. Loc.; (first report).
R. C. Tarrant's No. 1 Butler, CEL NW SE Sec. 15-34n-6w. Loc. (first report).
A. B. Cobb's No. 6 Walberger, SE SW SE Sec. 33-35n-6w. Drlg. 500 ft.; (first report).
Santa Rita O. & G. Co.'s No. 5 Whetstone, C Lot 2, Sec. 27-35n-6w. Drlg. 500 ft.
R. C. Tarrant's No. 3 Hope, C NE Sec. 18-34n-5w. R.U.
Annand-Hutchings' No. 5 Federal Ld. Bnk., CSL NE SW Sec. 11-34n-6w. Drlg. 1,140 ft.; Colo. 520 ft.; cmtd. 10¾-in. at 550 ft.
Texas Co.'s No. 8 Unit 9, C NW NE Sec. 9-32n-5w. Spdg. 30 ft.
Glacier Prod. Co.'s No. 4 Corrigeux, C SE SW Sec. 28-33n-5w. Drlg. 2,325 ft.
Consolidated Gas Co.'s No. 3 State, SE NW SE Sec. 26-35n-6w. Cmtd. 10¾-in. at 445 ft.; T. Colo. 420 ft.
Santa Rita O. & G. Co.'s No. 3 Rasmussen, C NW SE Sec. 32-33n-5w. Drlg. 1,900 ft.
Texas Co.'s No. 2 Unit 11, SE NW Sec. 11-35n-6w. Drlg. 2,700 ft.
Glacier Prod. Co.'s No. 5 Bonnett, C NW SE Sec. 4-32n-5w. Drlg. 430 ft.
Texas Co.'s No. 5 State, C NE NE Sec. 16-32n-5w. Drlg. 3,008 ft.; cmtd. 7-in. at 2,970 ft.
Texas Co.'s No. 5 Curran, C NW SE Sec. 8-32n-5w. Drlg. 2,951 ft.
Castle-Pardee's No. 2 Tarrant-Corriguex, SE NE NE Sec. 2-33n-6w. Drlg. 2,385 ft.
Texas Co.'s No. 4 Tweedy, C SE NW Sec. 21-35n-6w. Cmtd. 5½-in. csg. at 2,920 ft.; 500 ft. O.I.H. from sd. at 2,923-26 ft.
Cobb-Reagan's No. 4 Jackson, SW SW SE Sec. 5-32n-6w. R.U.R.

Hill County

Wm. Hanlon's No. 1 Govt., C SW NE Sec. 19-37n-15e. Spdg.

Toole County

Another large well was completed on the west side of the Kevin-Sunburst field in the Fulton Petroleum Co.'s No. 4 Thompson, CNL SW NE Section 28-35n-3w, which is flowing 250 bbl. per day after acidizing with 500 gal. The contact at 1,715 ft. was dry. After going 27 ft. into the lime it had a fair show of oil and then ran into water at 1,780 ft. The hole was plugged back to 1,750 ft. with the above-mentioned results.

Henry Vander Pas' No. 4 Cedar Creek, CWL SW SE Section 31-35n-1w, was completed at 1,430 ft. for 50

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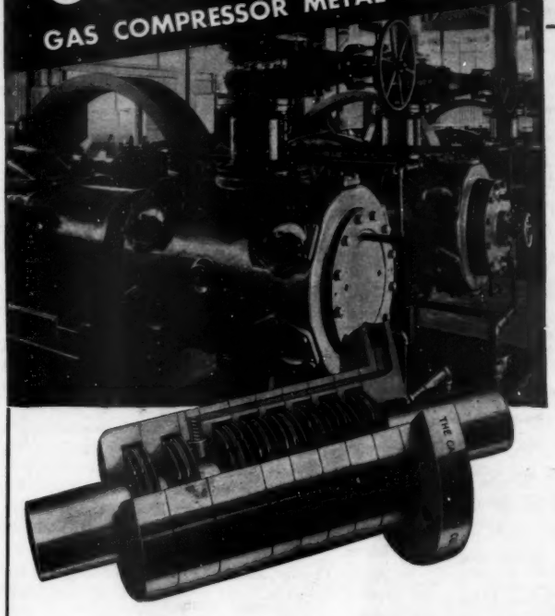

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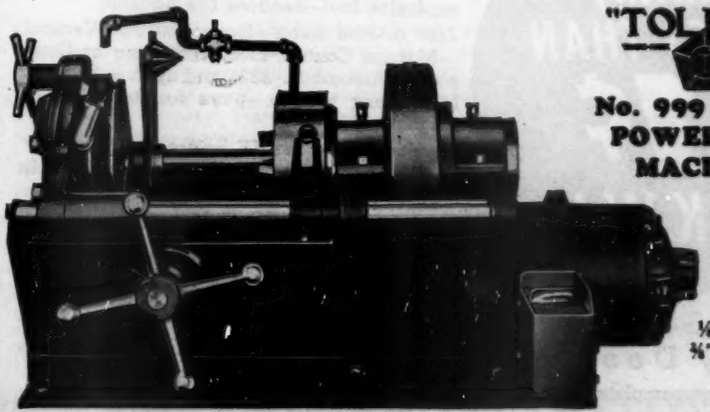

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⅜" TO 1½" BOLTS

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TOLEDO, OHIO NEW YORK OFFICE, 72 LAFAYETTE STREET

bbl. per day from the contact at 1,427-30 ft. after acidizing with 1,000 gal. The Sunburst at 1,190-1,200 ft. was dry. There were six new operation.

Coolidge & Coolidge's No. 7-A State, NW SW NW Sec. 36-36n-2w. Drlg. 850 ft.; (first report).
Adams-Hesla Oil Co.'s No. 2 McAdams, C SE SE Sec. 21-35n-2w. T.D. 180 ft.; fsg.; (first report).
Big West Oil Co.'s No. 3 Ellingson, SW SE SW Sec. 14-35n-3w. Drlg. 760 ft.; (first report).
J. H. Agen's No. 2 Goeddertz, NE NW NW Sec. 23-35n-3w. Drlg. 140 ft.; (first report).
Imperial-Craig Co.'s No. 2 Gause, C SE NW Sec. 18-35n-1w. Drlg. 960 ft.; (first report).
Texas Co.'s No. 12 Bruins, SE SW SE Sec. 9-35n-2w. Loc.; (first report).
Twin Fields Oil Co.'s No. 1-A Govt., NW cor. Sec. 28-35n-3w. Drlg. 650 ft.
Rimrock Oil Co.'s No. 6 Schmidt, NW SE NW Sec. 29-35n-3w. T.D. 1,707 ft.; cmtd. 7-in.; W.O.C.
H. O. and C. D. Stock's No. 1-A Govt., SE NW SE Sec. 17-35n-2w. Drlg. 510 ft.
A. E. Crumley & Son's No. 19 Fryberger, NE NW SE Sec. 24-35n-3w. T.D. 1,608 ft.; contact 1,606 ft.; S.O.; will acd.
Wm. Hanlon et al's No. 1 Merton Mortgage, C SW SE Sec. 6-37n-1w. Landed 12½-in. at 250 ft.
Coolidge & Coolidge's No. 6-A State, SW NW NW Sec. 36-36n-2w. T.D. 1,460 ft., in T. stray sd.; 2,000,000 cu. ft. gas at 1,460 ft.; rig burned.
O. A. Nepstand's No. 1 Hugi, NW SE NW Sec. 11-35n-3w. Drlg. 710 ft.
G. & A. Oil Co.'s No. 15 Goeddertz, CEL NE SW Sec. 23-35n-3w. T.D. 1,691 ft.; contact 1,673 ft.; 7-in. at 1,486 ft.; pmpd. 7 B.P.D.; will acd.
L. J. Yealy's No. 14 Shaw, NW SW NE Sec. 35-36n-2w. Drlg. 200 ft.
S. V. Day's No. 1 Halter, C NE SE Sec. 17-35n-2w. T.D. 830 ft.; rng. 8¼-in.
Prevol & Shay's No. 6 Govt., NE NW SW Sec. 11-35n-3w. R.O.G.
R. G. Parrant's No. 1 Holbrook, C NW NE Sec. 2-36n-3w. T.D. 1,475 ft.; rng. 5-⅞-in.
Casper T. Olen's No. 9 Engemoen, NW NE NW Sec. 14-35n-2w. Drlg. 1,465 ft.

Yellowstone County

Calitana Oil Co.'s No. 1 Stallinberger, NE NE SW Sec. 18-3n-23e. T.D. 5,129 ft.; cmtd. 7-in. at 4,997 ft.; acd. and showing few bbl. 45° oil.
Riverton Oil Co.'s No. 1 Fox, CEL NW NE Sec. 14-2n-23e. T.D. 2,150 ft.; C.O. at 1,920 ft. to res.

UTAH

Daggett County

Mountain Fuel Supply Co.'s No. 1 Govt., SE NE NE Sec. 19-3n-24e. Drlg. 4,490 ft.

SOUTH DAKOTA

Butte County

Two Top O. & G. Co.'s No. 2, SE NE Sec. 30-10n-6e. T.D. 2,725 ft.; rng. Schlmb. test; Muddy at 2,550-75 ft.; had S.O.&G.

Illinois Fields

(Continued from Page 61)

Wildcat Progress

In Iroquois County Whitlow's No. 1 Gannon, NE SW SE Section 5-27n-12w, was shut down at 1,080 ft., to make repairs. Devonian lime was topped at 173 ft., Silurian lime at 385 ft., and Edgewood lime at 815 ft.

In Shelby County Walker's No. 1 Odell, C E½ SE NW Section 20-14n-2e, drilling at 2,224 ft. Johnson Drilling Co.'s No. 1 Schaffer, W½ NW NE Section 27-10n-5e, shot with 30 qt. at 1,951-64 ft., cleaning out; water coming in from damaged casing.

In Coles County Carter Oil Co.'s No. 1-A Seaman, SE NE SW Section 35-12n-7e, total depth 2,027 ft., Ste. Genevieve lime topped at 2,000 ft., was treated with 2,000 gal. of acid; swabbed and flowed 8 bbl. of oil per hour; later flowed 88½ bbl. of oil in 9 hours and 45 minutes, with no water; not yet completed.

In Clark County Allen & Sherritt's No. 1 Harper, SE NW SW Section 5-11n-14w, drilling at 346 ft. Allen & Sherritt's No. 1 Biggs, NW NW SW Section 9-11n-14w, total depth 2,450 ft., pumping test made, but no gage was obtained. Strickler's No. 1 McFarland, NW NE SW Section 19-10n-13w, total depth 2,833 ft., plugged back to 2,820 ft., and pumped 2½ bbl. of oil and 4 bbl. of water in a 24-hour test. Dunn and others' No. 1 Metzgar, total depth 1,200 ft., running casing.

In Montgomery County Brown's No. 1 Lipe, SW SW SE Section 28-10n-3w, total depth 1,927 ft., has a hole full of water and will run casing before drilling into Devonian lime topped at 1,915 ft.

In Effingham County Turner's No. 1 Hoagland, NW NW SW Section 14-9n-4e, total depth 1,782 ft., 5-in. casing set at 1,775 ft.; drilling on underreamer lugs.

In Peoria County Blue Bell Oil Co.'s No. 1 Kyle, NW SW NW Section 17-8n-6e of fourth principal meridian, total depth 1,011 ft., plugged back to 920 ft., and running casing.

In Jasper County Aten's No. 1 Mendenhall, SW SW SE Section 17-8n-10e, total depth 2,064 ft.; shut down for orders.

In Madison County Wilson's No. 1 Danderman, SW SW SW Section 1-5n-6w, total depth 1,880 ft., shut down for orders after setting 7-in. casing at 1,827 ft., and drilling down and finding only water. B. G. & M. Drilling Co.'s No. 1 Isenburg, drilling at 100 ft.

In Bond County Seaboard Oil Co.'s No. 1 Tremblay, NW SE SE Section 22-5n-3w, corrected location, moving in machine.

In Jasper County Pure Oil Co.'s No. 1 Redman, C E½ NW NW Section 16-5n-10e, total depth 4,210 ft., and drilling. Rockford lime was topped at 4,150 ft. and New Albany at 4,165 ft. Pure's No. 1 Aldridge, C E½ NE NW Section 17-5n-10e, total depth 2,845 ft., and drilling; Fredonia lime topped at 2,788 ft.

In Crawford County Fuller and others' No. 1 Barnes, NW NE SW Section 7-5n-11w, drilling at 155 ft. Bell Brothers' No. 1 Wampler, C E½ SE SW Section 1-5n-12w, St. Louis lime topped at 1,700 ft., drilling at 2,000 ft.; had a small showing of oil in McClosky lime. Canadian Oil Co.'s No. 1 Goff, C E½ NW SE Section 16-5n-12w, shut down for orders at 1,760 ft.; Fredonia lime at 1,640-55 ft.; no shows reported.

In Clay County Madden's No. 1 Sloan, NE NE SW Section 6-4n-5e, shut down for orders at 2,685 ft.; no showing of oil. Fredonia lime top at 2,635 ft. Shulman's No. 1 Colcasure, C W½ SW SW Section 10-3n-7e, Paint Creek sand topped at 2,755 ft., drilling at 2,770 ft.

In Clinton County Trumbell and others' No. 1 Ackman, SE SW SE Section 22-2n-3w, drilling at 2,090 ft. Snell & Goldschmidt's No. 1 Schaefer, SW NE NW Section 33-2n-3w, fishing for tools at 2,327 ft. Trumbell and others' No. 1 Peters, SW cor. SE SE Section 33-2n-4w, drilling at 2,730 ft. Trumbell's No. 1 Dillman estate, NE SE NE Section 12-2n-5w, 8-in. casing set at 1,107 ft., drilling at 1,190 ft. Matches' No. 1 Nettemeyer, C SE NW Section 12-1n-5w, corrected location, drilling at 55 ft.

In Clay County Kingwood Oil Co.'s No. 1 Neff, SE SW NW Section 14-2n-7e, total depth 3,207 ft., tested on pump, made 11 bbl. of oil and 3 bbl. of water in 24 hours.

In Wabash County Big Chief and Mohawk's No. 1 Seibert, SW SE SW Section 34-2n-13w, drilling at 2,600 ft. Hill's No. 1 Wood, NE SE SE Section 21-2n-14w, total depth 2,620 ft., with a show of oil. Hayes & Wolfe's No. 1 Peach, SE SE SE Section 33-2n-13w, Fredonia lime at 2,667 ft., set 5-in. casing at 2,680 ft., total depth 2,704 ft., acidized with 3,000 gal., pumped 830 bbl. of oil and 25 bbl. of water in 24 hours; still testing. Renfro had rig up for No. 1 Zimmerman, SW SE SE Section 26-1n-13w.

Bander and others' No. 2 Seibert, SW NE NE Section 4-1n-13w, pay 2,697-2,701 ft., acidized with 3,000 gal., swabbed 20 bbl. per hour; still testing. Leighty's No. 1 Hahn, NE SW NW Section 8-1n-12w, pay at 1,516-42 ft., shot with 60 qt., pumped 210 bbl. in 24 hours; still testing. United States Oil Co.'s No. 1 Stillwell, SW NW SE Section 7-1n-11w, shut down for orders at 1,090 ft. Garmes and others' No. 1 Putnam, NE NE SW Section 3-1n-13w, Glen Dean top at 2,173 ft.; drill pipe stuck at 2,293 ft. W. E. Skeen's No. 1 Chapman, NW SW SW Section 13-1s-13w, rigging up rotary. Burr & Lambert's No. 1 Seiler, SE SE SE Section 27-1s-13w, McClosky lime at 2,615-21 ft., 28-minute drill-stem test developed 420 ft. of oil and no water. Set 5½-in. casing at 2,614 ft.

In Adams County Schuster's No. 1 fee, NW SE SW Section 25-2n-6w of fourth principal meridian, drilling at 105 ft.

In Wayne County Duncan's No. 1 Skelton, C E½ NE NE Section 32-2n-8e, Fredonia pay at 3,029-34 ft., set 5½-in. casing at 3,021 ft. Oil Well Drilling Co.'s No. 1 Lawrence, NE SW SE Section 34-1s-7e, drilling at 1,600 ft. Roache & Voyles' No. 2 Milner, C W½ SW SE Section 33-1s-7e, casing perforated at 3,262-67 ft., pumped salt water into pits; testing. Lessing Alch's No. 1 Dickey, C S½ SE NE Section 3-1s-6e, Fredonia lime topped at 3,149 ft. Perforated casing at 3,166-69 ft., and acidized with 1,000 gal. with a water load; swabbed down and filled up 500 ft. with fluid; will put on pump.

In Monroe County Cummings and others' No. 2 Boyer, SE SW SE Section 19-1s-10w, drilling at 2,000 ft. Hughes Petroleum Co.'s No. 1 Meyer, NE SW SE Section 28-2s-10w, total depth 1,550 ft.; running casing to shut off water.

In Washington County Ohio Oil Co.'s No. 1 Buchner, NW NE NW Section 9-2s-2w, location.

In Edwards County Barnes & Wickwire's No. 1 Broster, NE NE NE Section 3-3s-14w, total depth 2,606 ft., set 5-in. casing at 2,596 ft., drilled plug and tested salt water; shut down for orders.

In Jefferson County Rodger C. Young's No. 1 Whittington, SE SE SW Section 30-4s-3e, Ste. Genevieve lime at 2,810 ft., drilling at 2,812 ft.

In the Burnt Prairie pool, White County, John Lear's No. 2 Pollard, NE NE SE Section 29-3s-9e, flowed 425 bbl. of oil in 17 hours from McClosky lime at 3,416-26 ft.; still testing.

In Hamilton County Kingwood Oil Co.'s No. 3 Wilson, SE NW SE Section 6-6s-7e, was shot with 40 qt. at 2,683-99 ft., and pumped 179 bbl. in 10 hours; still testing.

In Williamson County Carterville Oil & Gas Co.'s No. 1 Cannon, NW SE SW Section 1-10s-1e, was shut down for orders at 2,045 ft.

In Massac County Kahle and others' No. 1 Harwick, SW SW SW Section 23-14s-3e, shut down for orders at 3,010 ft.

In McDonough County Lamoine Trust's No. 1 Cummings, NE NE NE Section 21-4n-4w of fourth princi-

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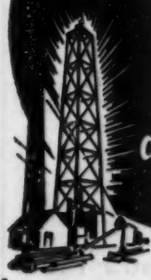

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pal meridian, Niagara lime top at 450 ft., with a small showing of oil; shot with 50 lb. of dynamite at 472-77 ft.; cleaning out.

In Madison County Jennings' No. 1 Mossiman, SE SW NW Section 22-4n-5w, shut down for orders at 3,100 ft., Trenton lime topped at 2,702 ft.

In Bond County Barkley's No. 1 Thompson, NW NE NE Section 2-4n-4w, rigged up standard tools.

In Lawrence County Walter Payne's No. 1 Monjar, SW NE NW Section 29-4n-11w, fishing for tools at 1,695 ft. Harlan Kays' No. 1 Ira Griggs, SW NW SE Section 12-3n-13w, machine on location. W. L. Dorsey's No. 1 Vandermost, SE SW NW Section 2-2n-12w, shut down for orders at 1,834 ft.

WESTERN KENTUCKY

OWENSBORO, Ky., June 3.—A 200-bbl. well from Jett sand in the Utica district in Daviess County was the best well of the week in western Kentucky. Three oil wells and four dry holes were completed during the week and 10 new operations were announced.

In Breckinridge County, Pleasant Grove Church district, C. D. Lambert's No. 1 George Blair, location.

In Butler County, Huntsville district, J. P. Patrick and others' No. 4 V. A. Harrison, dry hole, total depth 388 ft. In Silver City district C. G. Schmitt and others' No. 3 D. Brown, 50 acres, spudding.

In Daviess County, Gatewood district, Sohio Producing Corp.'s No. 1 Roy D. Bickett, location. In Utica district J. C. Ellis and The Petroleum Co.'s No. 7 A. T. Hansford estate, dry hole, through Jett sand, total depth 1,251 ft. Baldwin Oil Co.'s No. 1 W. D. Iglehart pumped 200 bbl. of oil and 28 bbl. of water in 19 hours from Jett sand at 1,130-46 ft.; total depth 1,148 ft. Master Oil Co.'s No. 3 W. D. Iglehart, 43 acres, location. In Red Hill district R. Hal Campton and others' No. 5 F. W. Jackson, moving in. In Maceo district Hart & Hart's No. 2 W. M. Nance, rigging up. In Handyville district Master Oil Co.'s No. 5 E. W. Richmond, 60 bbl. a day from Jett sand at 1,195-1,227½ ft.; total depth 1,227½ ft.

In Hancock County, Hawesville district, S. Zanstis and P. Bendas' No. 2 Sam Maserve, rigging up. W. J. Flesher's No. 17 Newman Mineral Reserve, dry hole at 725 ft.

In Hopkins County, 2 miles north of Richland, S. C. Yingling's No. 2 L. W. Schmetzer, rigging up.

In Ohio County, Fordsville district, Henry Scholl's No. 2 Ira Hale, spudding. Guthrie's No. 1 V. C. Hastings, dry hole through Jett sand, total depth 351 ft. In Pleasant Grove Church district, C. D. Lambert's No. 2 W. Walker, drilling at 80 ft. In Pattyville School district P. P. Murphy and others' No. 4 Floyd Walker, 12-bbl. well in Jett sand, 252-78 ft.; total depth 342 ft.

Eastern Fields

(Continued from Page 79)

Deep Tests

On Chestnut Ridge in Fayette County, Peoples Natural Gas Co. is drilling at 3,221 ft. on the Piedmont Coal Co. lease in South Union Township. No water has been encountered below the surface casing and the hole will now be cased and reduced from 11 in. On Laurel Ridge in Stewart Township the New Penn Development Co., William E. Snee, and E. G. Mueller are down 7,253 ft. on the Gregg L. Neel farm. This is a corrected measurement.

WEST VIRGINIA

No new oil wells were reported from West Virginia during the week. In Boone County Owens, Libby-Owens Gas Department completed No. 26 Allen and Pryor in the Berea sand at 2,298 ft. and it gages 133,000 cu. ft. a day. This is in Scott district. In Washington district, Pond Fork Oil & Gas Co. completed No. 5 fee at 2,881 ft. and while cleaning out after shot it gaged 148,000 cu. ft. a day.

In Cabell County W. C. Kingery completed the test on the J. Leitner farm in Guyandotte district at 2,937 ft. It gages 134,000 cu. ft. a day.

In Braxton County Pittsburgh & West Virginia Gas Co. completed a gas well on the Marja Brown Fear farm in Birch district in the Big lime at 1,647 ft. with a gage of 459,000 cu. ft. a day. In this district this company drilled No. 7732 Ed L. Boggs to 1,542 ft., the Big lime, and it gaged only 3,000 cu. ft. a day. Same company has a new location in Birch district for No. 7730 Grace Berry and others.

In Clay County Thompson Gas Co. completed No. T-43 Thompson Land & Coal Co., in Pleasant district, at 924½ ft., the Salt sand, with a gage of 539,000 cu. ft. a day.

In Wayne County Thompson Brothers completed a test on the Wayne County Poor Farm at 3,127 ft. It gages 180,000 cu. ft. a day.

Oriskany Gas Field

In Poca district, Kanawha County, United Carbon Co. is completing No. 824 Rosie E. Scott and others with the Oriskany topped at 5,035 ft. and at 5,085 ft. a gage of 4,355,000 cu. ft. a day. In this district this company is drilling No. 830 O. B. Boggess at 685 ft. and rigging up No. 831 Mary E. Carney and others.

In Poca district the Columbia Carbon Co. completed a well on the King and others land at 5,008 ft. with the Oriskany topped at 4,965 ft. and a gage of only 492,000 cu. ft. a day before shot. Here this company is drilling No. 1 Joseph Hughart at 4,535 ft. and No. 1 D. W. Taylor and others at 1,610 ft. and moving in tools to start No. 1 Fay E. Hughart.

Godfrey L. Cabot, Inc., reached 5,190 ft. or in the Oriskany sand in No. 4 Putnam Co. in Poca district and after testing found a leaking casing which is now being pulled. It has a volume of 946,000 cu. ft. a day without drilling through the sand. This company is drilling No. 3 D. Holmes Morton at 2,825 ft., a former Big lime gasser; No. 1 Ida P. Gibson and others at 1,544 ft.; shut down fishing at 4,747 ft., No. 3 J. T. Bonham and hauling rig for No. 4. In Union district this company has made a location for No. 2 L. M. Lafollette.

In Poca district the West Virginia Gas Corp. is drilling No. 038 Elizabeth Thaxton and others at 4,060 ft., and No. 041 Samuel H. Fields at 320 ft. The United Fuel Gas Co. is drilling No. 4878 J. P. Bailey at 3,070 ft. and No. 4880 Allie Pratt and others at 943 ft. The Pond Fork Oil & Gas Co. has started drilling No. 1 Anna M. Jones.

In Jackson County Joe Rubin and others are drilling at 3,245 ft. in the wildcat on the C. E. Andricks farm in Grant district. In Washington district Godfrey L. Cabot, Inc., made a location on the Charles L. Mangus heirs farm. Here United Carbon Co. made a location for No. 6 Elizabeth Ward Perkins. In Ripley district West Virginia Gas Corp. made a location for a test on the R. S. Coleman farm, elevation 717.2 ft.

Gulf Coast Fields

(Continued from Page 65)

Magnolia Petroleum Co.'s No. 54-A West, perforated casing 5,505-26 ft., 428 bbl., ¼-in. choke.

Liberty County

Esperson field: R. A. Welch and others' No. 1 fee, 7,505 ft., dry and abandoned. Hull field: Keown Oil Corp.'s No. 5 Hankamer, sand 2,600-30 ft., 393 bbl., ⅜-in. choke.

Matagorda County

Van Vleck field: Skelly Oil Co.'s No. 19-B Cobb, sand 7,465-95 ft., 389 bbl., ⅞-in. choke.

Orange County

Port Neches field: Phillips Petroleum Corp.'s No. 1 Starks, perforated casing 4,755-60 ft., 96 bbl., 7/64-in. choke.

Polk County

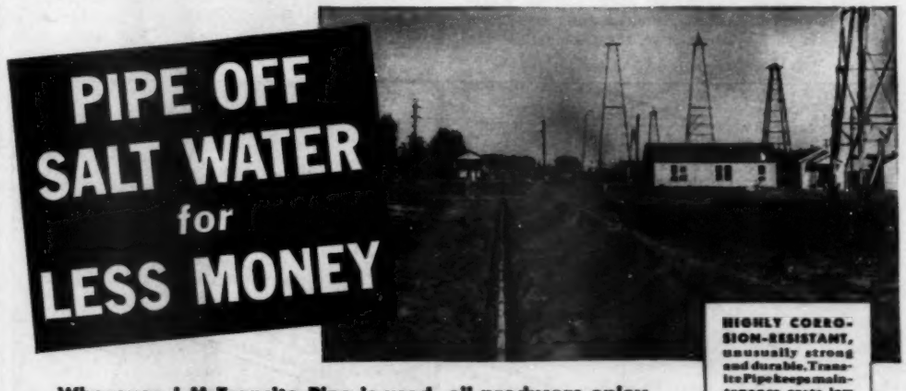
Segno field: Gordon Oil Co.'s No. 9-A Wing, 8,120 ft., 595 bbl., ¼-in. choke.

Tyler County

Joe's Lake field: Republic Production Co.'s No. 4 fee, 5,000 ft., dry and abandoned.

Wharton County

Withers field: Texas Co.'s No. 36-A Pierce, perforated casing 4,692-96 ft., 6 bbl., 5/64-in. choke. Texas Co.'s No. 72-C Pierce, 5,391 ft., 125 bbl., ⅛-in. choke.



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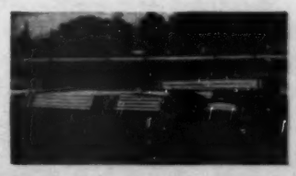

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North and East Texas

By
D. H. STORMONT

6 New Wildcats in Montague; Deep Lime Pool in Prospect

WICHITA FALLS, Tex., June 3.—The announcement of six new wildcat tests for the increasingly active county of Montague, together with possibility of a new Ordovician oil-producing spot in western Wichita County, featured the week's work in the North Texas district.

In western Wichita County and between the K.M.A. field and the Consolidated field of eastern Wilbarger County, a wildcat test drilled plug from casing cemented on top of saturation in the Ellenburger lime and was preparing to acidize in an attempt to complete for a new field discovery. The test is Consolidated Oil Co. and Texas Eastern Oil Co.'s No. 1-K Barnes, NE SW Section 11, Block 7, H.&T.C. Survey. Casing was cemented at 4,336 ft. after saturated Ellenburger lime was drilled from 4,336 to 4,370 ft. The plug was drilled as the week closed and the hole was bailed dry. It was deepened to 4,395 ft. where it was shut down. The entire section from 4,336 to 4,395 ft. will be given an acid treatment this week.

With definitely more encouraging results appearing for Montague County's wildcat activity, six new locations, all in wildcat territory, were staked during the past week. To further add to the bettered status of the county's work, the second well in the Omohundro field was tested and the second and third wells in the Bonita (Sinclair Prairie) field were gaged.

The most southern wildcat in the Fort Worth basin has been staked by Walter Gant in the extreme southern part of Montague County. It will be No. 1 Will Laird, R. T. Millard Survey, Abstract 70, about a mile north of the Wise County line and about 7 miles west of the town of Sunset. It is on a block of 5,000 acres and will be carried to either 6,000 or 7,000 ft.

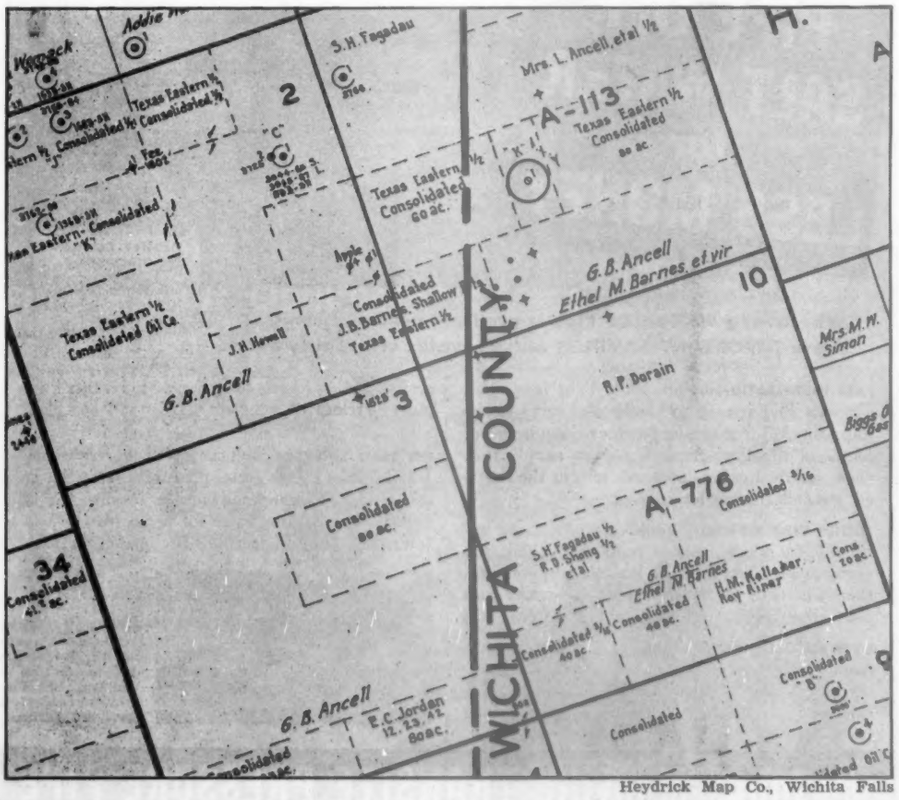
About a mile northeast of Stoneburg, in the west central part of the county, Continental Oil Co. is reported to have staked location for a 6,000-ft. wildcat in the SE cor. Section 8, on the A. M. Drummond land, Limestone C.S.L. Survey. The location is about 5 miles east of the wildcat being drilled by Sinclair Prairie Oil Co. on the Threadgill lands, Block 10, Jack C.S.L. Survey.

A new 5,000-ft. wildcat has been announced by Tom F. Hunter, Wichita Falls, for his farmout block of 1,400 acres in the northern part of the county and in the Illinois bend of the Red River. The wildcat, which must be spudded by July 15, according to farmout agreement, is tentatively located on the Fatheree lands, eastern part of the S. L. Gilliland Survey, 3 miles south of the town of Illinois Bend.

Sinclair Prairie Oil Co., the most active operator in Montague County's play, will make another attempt at wildcat production at a test to be definitely located within the next 2 weeks. The company recently acquired acreage which is reported to have carried an agreement to drill. The area is 3 miles south of the town of Bonita and about 4 miles southeast of the company's recently discovered Bonita field. The majority of acreage was acquired in the N. B. Starkey Survey, Abstract 110; C. Boger Survey, Abstract 65; and J. T. Stewart Survey.

Three locations have been staked in the townsite of Bonita, about a mile northeast of the Bonita field. Drilling permits have been issued to T. C. Rose and F. K. Williford, who will drill one well in the yard of the First Baptist Church and another on the W. E. Goldsmith lot. The third test is on the extreme edge of the townsite and will be Sinclair Prairie Oil Co.'s No. 1 Pearl Lee, just north of the corporate limits.

Possibility of a new deep wildcat in southwestern Clay County was seen when it was reported that Deep Rock Oil Corp. was obligated to drill a test on its recently acquired acreage 2 miles west of the Henderson Strawn sand field. The tentative location is in NE cor. S½ Section 2602, T.E.&L. Survey.



Heydrick Map Co., Wichita Falls

Indicating the discovery of Wichita County's second Ellenburger lime (Ordovician age) oil field in as many months is Consolidated Oil Co. and Texas Eastern Oil Co.'s No. 1-K Barnes, between the Consolidated area of eastern Wilbarger County and the K.M.A. field. Casing has been cemented for completion

New Completions at Bonita

As the week closed gages were reported on the second and the third wells in Sinclair Prairie Oil Co.'s recently discovered Bonita field in Montague County. A location west of the 5,200-ft. discovery well, Sinclair Prairie Oil Co.'s No. 1 Doty, Jones Survey, kicked off to head 370 bbl. of oil in 10 hours through casing. After 2-in. tubing was run the well flowed 126 bbl. of oil the first hour, 49 bbl. the second hour and 51 bbl. the third hour. Production is through perforation from 5,436 to 5,437 ft.

A half mile northeast of the discovery well, Magnolia Petroleum Co.'s No. 1 Gilbert, Bryant Survey, is shut in after flowing 115 bbl. of oil the first hour, 93 bbl. the second and 86 bbl. the third hour. The flow was through open tubing from 5,426 to 5,434 ft. Gas volume was estimated at 1,000,000 cu. ft. daily.

Somewhat discouraging results were noted at a ½-mile-north outpost to the deep Omohundro field, just south of Ringgold. British American Oil Producing Co.'s No. 1 Martin, Section 27, Block 4, H.&T.C. Survey, drilled plug from casing at 5,680 ft. and after washing the well in it flowed only a 2-bbl. head. Swabbing attempts failed to make the well kick off and as the week closed it was shut in so pressure would build up. The test drilled 10 ft. of pay section from 5,685-95 ft. and prior to cementing casing was estimated as a good producer.

Possible New Fields

The probability of a new Caddo lime oil field for eastern Clay County and the definite opening of a new shallow field for southwestern Archer County were reported as the week closed.

L. T. (Bobby) Burns' No. 1 First National Bank of Olney, Section 2, S.P. Survey, drilled saturated sand from 1,462-63 ft. and was shut down to cement casing for completion. With machine being moved to the discovery well for drilling of plug, rotary has been moved to a location north for the No. 1 State-Blewett, R. F. Fisher Survey. The No. 2 Bank of Olney has been located 400 ft. south of the discovery.

Eight miles east of Henrietta, Walter Gant's No. 1 Edwards, an old temporarily abandoned wildcat that was reentered several weeks ago for testing, is indicating commercial production from the Caddo lime. It is in the S. C. Beldon Survey and has swabbed an estimated 5 bbl. hourly through perforations from 5,880-5,913 ft. It has been acidized with 2,000 gal. Testing continued as the week closed.

NORTH TEXAS COMPLETIONS

Archer County

British American Oil Producing Co.'s No. 1 T. B. Wilson C, 4,692-4,740 ft., 259 bbl. British American Oil Producing Co.'s No. 1 T. B. Wilson F, 4,682-4,730 ft., 96 bbl. Cato Oil Co.'s No. 12 O. T. Anderson, 1,058-72 ft., 238 bbl. Cato Oil Co.'s No. 13 O. T. Anderson, 1,060-74 ft., 248 bbl. Dillard and others' No. 5 A. P. Nichols, 4,333-4,404 ft., 1,164 bbl. Bert L. Ligon and others' No. 6 Dr. J. A. Little A, dry and abandoned, 1,320 ft. Bert L. Ligon and others' No. 6 J. H. White

D, 3,862-3,916 ft., 571 bbl. Bert L. Ligon and others' No. 12 J. H. White D, 1,666 ft., dry. Bert L. Ligon and others' No. 1 J. H. White E, 4,445 ft., dry. McKanna, Inc.'s No. 1 L. A. Snider, abandoned location. Petroleum Production Co.'s No. 2 S. R. White and others' 4,371-4,417 ft., 1,175 bbl. Phillips Petroleum Co.'s No. 1 Dr. J. A. Little "Novella," 4,357-4,413 ft., 870 bbl. Rancho Oil Co.'s No. 19 H. O. Prideaux, 644-70 ft., 7 bbl. Young & Woody Drilling Co.'s No. 1 Abercrombie and others, 1,334-52 ft., 5 bbl.

Baylor County

H. B. Madden's No. 1 J. J. James, 1,250 ft., dry.

Clay County

E. N. Costley and others' No. 2 W. J. McInnes C, 1,072-89 ft., 120 bbl. F. H. Gohlke's No. 1 C. C. Bunninburg, 1,194 ft., dry. Shell Oil Co.'s No. 2 H. Henderson, 3,539-51 ft., 238 bbl.

Cooke County

Cox & Hamon's No. 10 K. Neu B, 4,699-4,709 ft., 695 bbl. Magnolia Petroleum Co.'s No. 5 S. L. Ramsey, 4,673-98 ft., 692 bbl. Mudge Oil Co.'s No. 5 S. D. Meador, 1,542-92 ft., 85 bbl. Seitz and others' No. 9 R. B. Poteet, 1,173-90 ft., 30 bbl.

Jack County

Lewis Production Co.'s No. 1 H. C. Derrick, 3,078-3,200 ft., 328 bbl.

Montague County

George G. Golden's No. 1 C. R. Tucker, 1,260 ft., dry.

Wichita County

Hedrick Oil Co.'s No. 2 J. D. Cooper, 1,338 ft., dry. Barrow and others' No. 3 C. Birk A, 4,020-4,130 ft., 221 bbl. Consolidated Oil Co.'s No. 13 Mrs. J. James, 3,973-4,011 ft., 990 bbl. Dalport Oil Co.'s No. 4 Munger Brothers, 3,800-70 ft., 1,133 bbl. Golding & Cochran's No. 9 D. R. Preston, abandoned location. W. B. Hamilton's No. 1 N. H. Martin E, 3,555-68 ft., 275 bbl. Kadane-Griffith's No. 2 N. H. Martin, 3,675-3,825 ft., 822 bbl. King Oil Co.'s No. 12 W. T. Waggoner R, 1,578-88 ft., 60 bbl. F. W. Merrick, Inc.'s No. 3 O. M. Jones, 4,021-4,100 ft., 640 bbl. Shell Oil Co., Inc.'s No. 8 N. C. Griffin, 3,918-93 ft., 868 bbl.

Wilbarger County

King Oil Co.'s No. 12 W. T. Waggoner N, abandoned 710 ft. Pois & Schulz's No. 3 J. P. King, 1,460-78 ft., 50 bbl.

EASTERN TEXAS

DALLAS, Tex., June 3.--The staking of two wildcats, one a deep operation in the Mexia field of Limestone County and the other a 7,500-ft. wildcat in Anderson County, marked a rather inactive week for the eastern Texas district. Field operations dropped to a several week's low point with only four completions listed for the East Texas field and only three new locations. Two completions were listed for the East Central Texas fields, one a large gas and oil well in the Long Lake field and the other a wildcat abandonment in Van Zandt County.

The Mexia field's deep operation will be the second attempt to obtain production from horizons below the Woodbine sand. Several weeks ago Peyton Brothers of Mexia abandoned No. 1 Harris, P. Varela Survey, at a total depth of 5,777 ft. after pipe was lost in the hole. The new operation is S. J. Taylor, Tyler, and others' No. 1 J. W. Reid, spotted 150 ft. from the northwest and 714 ft. from the northeast lines of a 117-acre tract in the P. Varela Survey. The old Mexia field is in need of gas for lift purposes and such production has been established by the Glen Rose gas field opened several months ago near Grosebeck.

In Anderson County, carrying a 7,500-ft. contract depth, is Saul Rabenowitz's reported test in the Frankston area. The operator has agreed to drill on acreage recently acquired in the immediate vicinity of the townsite of Frankston. While the location has not been definitely made, it is reported that the spudding date is before July 30.

Indications of a new test for the near future in Van Zandt County were seen when it was reported that L. L. Handen and H. Grady had completed their 5,000-acre block which they have been assembling for a Woodbine sand wildcat test. The block lies in the R. Cunningham, W. C. Scott, J. Sparks and George Clevenger surveys.

With contract let for northeastern Upshur County's newest wildcat location, work of clearing the drill site has begun. It is A. C. McGahhey's No. 1 M. A. Conner, scheduled 4,500-ft. test in the SW cor. of a 417-acre tract in the A. Butler Survey.

In Kaufman County and attracting considerable attention as it nears the deep zones is T. G. Shaw's No. 1 Wynne, 6,800-ft. contracted wildcat 8 miles east of the town of Kaufman. The drill topped the Paluxy at 4,957 ft., topped the upper Glen Rose at 5,235 ft., topped the anhydrite at 5,934 ft., top massive at 6,123 ft. and based the massive at 6,255 ft. The wildcat will test the Travis Peak series and is expected to start coring within the next 100 ft.

EAST TEXAS FIELD COMPLETIONS

(One-hour gages)

Gregg County—Longview Area

Humble Oil & Refining Co.'s No. 52 W. R. Hughes, 3,675-83 ft., 35 bbl.

Gregg County—Kilgore Area

Mabee Oil & Gas Co.'s No. 26 M. T. Cole, 3,507-08 ft., 70 bbl. Texas-Canadian Oil Co.'s No. 2 J. B. Watson, 3,550-52 ft., 75 bbl.

Upshur County—Longview Area

B. F. Phillips' No. 2 G. B. Everetts, 3,662-64 ft., 40 bbl.

EAST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Anderson County

In the Long Lake field, H. L. Hunt's No. 3 A. Cartmell, gas pay from 5,163-95 ft. and oil pay from 5,305-34 ft., 115,000,000 cu. ft. gas and 89 bbl. daily daily.

Van Zandt County

A wildcat, J. B. Daniels' No. 1 W. R. Odom, J. Garcia Survey, 4 miles northeast of Mabank, dry and abandoned at total depth of 4,042 ft.

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19 Oil Wells, 2 Gassers and 9 Dry Holes, Week's Record

By OTTO C. PRESSPRICH

SAGINAW, Mich., June 3.—Rate of production varied from 4 to 406 bbl. a day in the 19 oil-well completions recorded last week in Michigan fields. The combined potential initial was 3,082 bbl. In addition, two gas wells were completed, one gas test failed and there were nine unsuccessful oil-drilling operations abandoned.

Interest was growing in two deep tests as they neared their goals, test of the Sylvania sand at around 5,000 ft. Both are in Midland County, C. L. Maguire's No. 1 Clark, in Section 32 of Warren Township, 18n-2w, being well below 4,950 ft., while Carter Lease, Inc.'s No. 6 fee in Section 18 of Porter, 13n-1w, reported at about 4,450 ft. The Maguire test is the deepest tried in Michigan since 1938 when Sun Oil Co. got a show of oil at 5,069 ft. on a location 10 miles east of the present activity.

Wildcatting was active in many parts of Central Michigan, tests in Clare, Wexford, Osceola and Gladwin counties nearing their objectives. Rowmor Corp. logged a show of oil at about 3,200 ft. in Marion Township, 20n-7w, Osceola County, while Virgil R. D. Kirkham and others expected to complete in a day or so their wildcat in Clam Lake Township, 21n-9w, of Wexford. In Clare's Franklin Township, 20n-3w, Sun Oil Co. was in the Dundee limestone. Both the Kirkham and Sun tests were below 4,000 ft.

Clare's northern pool, in Redding Township, appeared due for more development as the result of three successful completions there, two by Pure Oil, and the third by American Drilling Co.

The gas-test failure was in Clare's Hamilton Township, the producers each rating 549,000 cu. ft. a day, being Taggart Brothers' wells in Sections 27 and 29 of Clare's Lincoln Township.

Best well of the week was McClanahan and others' No. 3 Nixon in Isabella's Wise pool. Completed at 3,747 ft., it produced initially 406 bbl. in a day. In Isabella's Fremont, Chapman Oil Co. abandoned No. 1 Dreier wildcat at 3,568 ft., hitting water in the Dundee after picking up two shows of oil.

Southwestern areas are locations for most of the 23 new drilling permits issued during the week by the state Conservation Department. Ottawa got five, Van Buren three, Allegan four, Kent and Cass counties one each. The basin area will see five new developments, three listed for Wise Township. Other tests are scheduled in Saginaw and Clare counties. These are wildcats. Other development is planned in Washtenaw, Monroe and Newaygo counties.

Allegan County

Heath Township (3n-14w): W. Spencer Cook's No. 2 George Essink, NW SE NE Section 4, rated 200 bbl. a day, naturally, being completed at a depth of 1,493 ft. Production, naturally, was 200 and 300 bbl. a day, respectively, from Howard E. Fowler's No. J-6 Japink, SE SW NW Section 3, completed at a depth of 1,441 ft., and No. J-5 Japink, SW SW NW Section 3, at 1,425 ft. Red-Man Oil Corp.'s No. 2 Herman Brower, NE SW NW Section 3, was completed at 1,495 ft. for production, after acid treatment, at the rate of 238 bbl. a day.

Salem Township (4n-13w): Universal Gas & Oil Corp.'s No. 1 Sutter, SW NW SE Section 14, was dry and abandoned at a depth of 1,620 ft.

Clare County

Hamilton Township (19n-3w): Sun Oil Co.'s No. 1 Switzer-Maynard and others, C NE Section 27, a test for natural gas, was unsuccessful and abandoned at a depth of 1,415 ft.

Lincoln Township (18n-5w): Taggart Brothers, Inc., reported two natural-gas completions, both rated as producing 549,000 cu. ft. a day, No. 26 John A. Mercier, C NE Section 27, and No. 25 Fred Powers, C NE Section 28, are the wells.

Redding Township (19n-6w): Pure Oil Co.'s No. B-16 J. S. Bicknell, C N½ NW NE Section 32, rated 89 bbl. a day, naturally, on completion at a depth of 3,887½ ft. American Drilling Co. completed No. K-2 State, C S½ SW NE Section 32, at 3,876 ft., and got initial natural production at the rate of 200 bbl. a day. Pure Oil Co.'s No. A-3 J. S. Bicknell, C N½ NE NE Section 34, was good for 213 bbl. a day, naturally, from a depth of 3,913 ft.

Gladwin County

Buckeye Township (18n-1w): C. W. Teater's No. 1 Newton Stahl, NW SE SW Section 24, was dry and abandoned at 3,605 ft.

Ionia County

Campbell Township (5n-8w): Neil Wagenaar abandoned No. 1 George A. Hooper, NW SW SE Section 29, at a depth of 2,469 ft.

Isabella County

Fremont Township (13n-5w): Chapman Oil Co.'s No. 1 George A. Dreier, C E½ NE NE Section 21, was dry and abandoned at a depth of 3,568 ft.

Wise Township (16n-3w): McClanahan Oil Co. and others' No. 3 Nixon, NW SW NE Section 17, was good for 406 bbl. a day, initially, after acid treatment, total depth being 3,747 ft. Gulf Refining Co.'s No. B-2 Albert Reed, NW NW NW Section 16, was completed at 3,746 ft. and after being treated with acid, produced initially at 278 bbl. a day.

Kent County

Walker Township (6n-12w): Welsh Oil Co.'s No. 3 Sarah Bunker, SW NW SE Section 5, at 1,146 ft., rated 6 bbl. a day, after acidizing.

Walker Township (7n-12w): Certain-Teed Products Co.'s No. 18 fee, NW NE SE Section 33, was acid-treated to get 191 bbl. a day, completion being at 1,885 ft.

Wyoming Township (6n-12w): Gordon Oil Co.'s No. 1 Lewis C. Rogers, SW SW NE Section 14, was abandoned at 1,974 ft. Crystal Crude Oil Co.'s No. 1 Wilma Porter, NW NE SE Section 14, completed at 1,910 ft., was good for 10 bbl. a day, after acid treatment, and Davell Petroleum Co.'s No. 2 Collins, SE NW NE Section 23, was producing 30 bbl. a day from a depth of 1,903 ft., after getting acid treatment.

Midland County

Porter Township (13n-1w): Pure Oil Co.'s No. 30 Nina B. Narmore, C N½ NE NW Section 15, rated 162 bbl. a day, after acid treatment, at a depth of 3,415 ft.

Monroe County

Dundee Township (6s-6e): Fisher-McCall and others' No. 2 A. Brunt, SE SW SW Section 30, produced 4 bbl. a day from 2,152 ft., after acid treatment.

Summerfield Township (7s-6e): Berell Oil Corp.'s No. 1 H. & G. Yape, SW SE NW Section 7, was abandoned dry at 2,296 ft.

Muskegon County

Fruitport Township (9n-15w): Dr. S. J. Higelmire's No. 1 John Haney, NW SW SE Section 33, was a dry hole, drilling being abandoned at 1,853 ft.

Ottawa County

Holland Township (5n-15w): Freeman Oil Co.'s No. 1 Leon H. Kiels, SW NW NW Section 26, was dry and abandoned at 1,534 ft.

Tallmadge Township (7n-13w): Smith Petroleum Co.'s No. 2 H. T. White, SW SW NE Section 23, rated 190 bbl. a day, after acid treatment, at 1,870 ft. Gulf Refining Co.'s No. 4 A. E. Rapp, NW NW SE Section 23, was good for 170 bbl. a day, from 1,880 ft., after acid treatment. American Drilling Co. was getting 40 bbl. a day after acid treating No. 1 Anna Snip, NE SW NW Section 23, also 1,880 ft. deep.

Zeeland Township (5n-14w): Basin Oil Co. and Bridger-Basin Oil Co.'s No. 1 William Van Zoeren, NW NW SW Section 12, a dry hole, was abandoned at 1,759 ft.

Van Buren County

Bangor Township (2s-16w): John H. McLean's No. 1 Ulrath, NW SE SW Section 21, was producing 100 bbl. a day, naturally, completion depth being 1,003 ft.

North Louisiana, Arkansas

Testing Smackover Lime in Two S. W. Arkansas Wildcats

By GEORGE WEBER

SHREVEPORT, La., June 3.—Two South Arkansas operators are coring the Smackover lime, a third is drilling for that formation, and a fourth is moving in material. A southeast outpost to the Paluxy lime prospect at Fouke, Miller County, Arkansas, failed to show signs of production, and Magnolia's 105th oil well was producing.

In North Louisiana a 2-mile-south outpost in the Olla field, La Salle Parish, has a showing of oil. The Cauble wildcat in Caddo Parish, near the Texas State line northwest of Vivian, failed to show production in a test at 3,085-92 ft. Wildcatting continued, with the deep test at Haynesville and a new Madison Parish test attracting attention.

Fouke Tests

The Standard Oil Co. of Louisiana's No. 1 Sturgis, Miller County, Arkansas, wildcat, topped Smackover lime at 9,306 ft., after penetrating 358 ft. of Buckner formation, the thickest yet found in South Arkansas. In coring the Smackover lime, dense lime with an odor of oil and gas was found at 9,321-31 ft. and a slight odor at 9,376-91 ft. A core taken at 9,391-9,406 ft. showed recovery of 5 ft. of hard dense lime, and at 9,406-21 ft. a 2-ft. recovery showed hard dense lime. This well, if unsuccessful in finding commercial production in the Smackover lime, will be plugged back to the Paluxy formation at 3,584-3,600 ft.

The Red Iron Drilling Co.'s No. 1 Philyaw, southeast of the above Standard Oil Co. test, had no showings in the Paluxy formation and was abandoned at 4,018 ft. Elsewhere in Miller County K. E. Jennings and J. J. Oil Co.'s No. 1 H. T. Wood, Section 33-18-28, near the Texas State line, southwest of the Fouke test, is shut down at 4,574 ft. awaiting orders.

In Lafayette County Atlantic Refining Co.'s No. 1 Bodcaw Lumber Co. also hit the Smackover lime in the past week. The wildcat, in Section 29-17-23, near the Columbia County border, topped the Buckner at 8,895 ft. and the Smackover at 9,039 ft. from the driller's log. Coring at 9,041-57 ft. gave a recovery of 1 ft. of hard dolomitic lime, 1 ft. 6 in. of dense oolitic lime, 1 ft. of slightly porous to porous oolitic lime with a gas odor, and 2 ft. 6 in. of slightly hard to slightly porous oolitic lime, showing a slight ether cut. Operators further cored at 9,057-77 ft. and recovered 4 ft. of hard gray oolitic lime, with a few streaks of slightly porous lime and a sulfur odor. Porosity was noted in a core at 9,100 ft., and oil saturation was found at 9,122-9,221 ft., the total depth.

Barnsdall Oil Co.'s No. 1 El Dorado & Wesson Railroad Co., in the extreme southeast corner of Columbia County, west of Junction City and near the Louisiana State line, is drilling below 4,400 ft. for the Smackover lime. In Union County, 6 miles east of the Schuler field, Standard Oil Co. of Louisiana has derrick up on No. 1 Zimmerman, another deep wildcat.

Olla Activity

Attention in the Olla field of La Salle Parish was directed to the Placid Oil Co.'s No. 16 Louisiana Central, a 2-mile-south outpost to production in the field. The Tertiary Wilcox was topped at 1,562 ft. and oil sands were reported at 2,180-2,204 ft. and 2,312-46 ft. The test is bottomed at 2,419 ft. and was shut in at latest reports.

A 4-mile-north outpost, Placid Oil Co.'s No. 17 Louisiana Central, C NW SE Section 19-11-3e, is rigging up for a deep test, which will be closely watched. The same operator's No. 15 Louisiana Central is located 1 mile northwest of No. 17 outpost, and has derrick up. O. K. Allen's No. 1 Breedlove, C SW NE Section 32-11-3e, about 2½ miles northeast of production, is shut down at 1,660 ft., having topped the Wilcox at 1,600 ft. Of the 11 active operations in field and outpost locations at Olla the remaining ones are drilling near to production. No completions were reported in the past week. The outcome of the several outpost wildcats around Olla will determine within a few days the possible extent of the productive area in the Wilcox sand.

Caddo Test

Disappointment met the efforts to test D. T. Cauble's No. 1 Darnell, Section 17-22-16, near the Texas line northwest of Vivian in Caddo Parish. The test logged a sand body between 3,002 and 3,052 ft. several weeks ago and after being shut down for some time perforated last week at 3,086-92 ft. and tested dry. Casing was reperforated at 3,085-90 ft. and again tested dry. The pipe was then shot with 9 qt. of nitroglycerin and the well tested salt water. It is shut down awaiting orders.

Two wildcats attracted attention during the week. In Claiborne Parish the deep Haynesville test, Ohio Oil Co.'s No. 15 G. W. Taylor Acct. 1, topped the James lime at 4,789 ft. and cored a salt-water section at 4,789-4,811 ft. The wildcat is drilling below 5,050 ft. H. L. Hunt is rigging up on a wildcat in Madison Parish, No. 1 Ayers Timber Co., C NW SW Section 18-15-10, about 38 miles southwest of Tallulah.

In the Waskom field of East Texas border Arkansas Louisiana Gas Co. completed another lower Glen Rose gas-condensate well and is beginning another

NORTH LOUISIANA COMPLETIONS

(24-hour gages)

Sligo—Bossier Parish

Triangle Drilling Co.'s No. 2 Chatman, 1,977 ft. east and 1,995 ft. south of NW cor. Section 18-17-11, 60 bbl. per day, using input gas; acidized with 2,500 gal. through perforations at 3,100-10 ft., it tested salt water with a showing of oil; plugged back to 3,090 ft. and reperforated at 3,070-80 ft. and 3,100-10 ft.; squeezed, and drilled to 3,131 ft.

Caddo—Caddo Parish

J. P. Griffin's No. 2 Muslow, Section 26-21-10, pumping 15 bbl., total depth 2,266 ft. O. K. Hickman's No. 1 Lavine, Section 12-20-16, pumping 20 bbl., total depth 1,507 ft. N. W. Pannill's No. 1 Muslow, Section 32-21-15, 100 bbl., acidized with 4,000 gal., total depth 1,560 ft. Sklar Oil Co.'s No. 2 Hobbs, Section 21-21-15, pumping 20 bbl., total depth 1,585 ft. Texas Co.'s No. 10 Herndon, Section 14-21-15, acidized with 4,000 gal., 90 bbl., open flow, total depth 1,651 ft. Texas Co.'s No. 5 Lake Front Oil Co., Section 8-20-15, total depth 1,491 ft., dry and abandoned.

Wildcat—Grant Parish

John Pundt's No. 1 Reed estate, 805 ft. south and 429 ft. west of NE cor. NW SW Section 10-7n-3w, total depth 3,153 ft., dry and abandoned.

Monroe—Union Parish

Memphis Natural Gas Co.'s No. 8 Lankford, Section 2-21-3, 1,500,000 cu. ft. of gas, rock pressure 960 lb., total depth 2,196 ft.

Cotton Valley—Webster Parish

Hunt Oil Co.'s No. 1 Robert Scott, C SE SE Section 19-21-9, 480 bbl. through ¼-in. choke, tubing pressure 675 lb., casing pressure 1,550 lb., set 7-in. casing at 8,708 ft. and perforated it at 8,640-50 ft.; Bodcaw oil sand at 8,606-49 ft.

Wildcat—West Carroll Parish

Hunter Co.'s No. 1 E. Lee unit, 1,980 ft. west and 660 ft. south of NE cor. Section 27-20-10, total depth 3,027 ft., salt water and abandoned.

ARKANSAS COMPLETIONS

(24-hour gages)

Magnolia—Columbia County

Standard Oil Co. of Louisiana's No. 1-C Gunnels unit, 660 ft. north and 595 ft. east of SW cor. SE NW Section 20-17-19, 318 bbl. through 11/64-in. choke, casing pressure 1,275 lb., tubing pressure 1,140 lb., total depth 7,558 ft.

Rodessa—Miller County

F. W. Burford's No. 1 Ritchie, C SW SE Section 7-20-27, 80 bbl. through 1-in. choke on tubing set on packer, 5½-in. casing set at 6,089 ft., total depth 6,173 ft., acidized with 3,000 gal.

Wildcat—Miller County

Red Iron Drilling Co.'s No. 1 Philyaw, C NW NE SE Section 7-17-26, dry and abandoned at 4,018 ft.

Urbana—Union County

Marine Oil Co.'s No. 1-A Thompson, 250 ft. south and 400 ft. east of the NW cor. SW SE Section 3-18-13, pumping 322 bbl., 30 per cent salt water, total depth 3,590 ft.

EAST TEXAS BORDER COMPLETIONS

Waskom—Harrison County

Arkansas Louisiana Gas Co.'s No. 1 Issac unit, E. Little Survey, 15,840,000 cu. ft. of gas, rock pressure 2,250 lb.; perforated casing at 5,885-5,935 ft., total depth 6,152 ft.

Production by Pool

Estimated daily gross production, all companies, week ended June 1:

NORTH LOUISIANA

	Bbl.
Bellevue	480
Caddo, light	5,255
Caddo, heavy	2,135
Converse	550
Cotton Valley	*15,500
Cross Lake	4,570
De Soto and Red River	1,050
Elm Grove	270
Haynesville	2,770
Holly	65
Homer	2,875
Lisbon	4,580
Olla	1,160
Pleasant Hill	85
Rodessa	20,510
Sarepta-Carterville	†350
Sligo	2,170
Sugar Creek	725
Urania	2,850
Zwolle	1,875
Total North Louisiana	70,125

SOUTH ARKANSAS

Atlanta	2,130
Big Creek	55
Buckner	2,265
Champagnolle	1,150
Dorcheat	1,140
El Dorado	1,660
Lewisville	950
Lisbon	240
Magnolia	20,400
Miller County	270
Nevada	575
Nick Springs	785
Rodessa	2,275
Schuler	18,500
Smackover, light	1,770
Smackover, heavy	13,840
Stephens	530
Troy	1,260
Urbana	930
Village	1,180
Total South Arkansas	71,005

*4,275 bbl. is distillate. †80 bbl. is distillate. Rodessa, Texas, 19,755 bbl.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ont., June 1.—Crude petroleum and natural-gasoline production in Canada in February was 655,586 bbl., compared with January production of 486,859 bbl. and a February 1939 output of 358,176 bbl. During the first 2 months of 1940 the output was 1,142,445 bbl., against 891,342 bbl. in the same period last year. Comparative figures for the various provinces are (in barrels):

Prov.	Jan.	Feb.	2 mos., 1939
New Brunswick	59	42	130
Ontario	15,750	15,592	32,006
Alberta	471,050	639,952	855,646
N.W. Terrritor.			3,560

Figures just issued by the Alberta lands and mines department show that crude and naphtha production from all Alberta fields in April totaled 617,271 bbl. against 556,410 bbl. in March. Turner Valley limestone oil wells increased from 520,357 to 586,248 bbl., but Turner Valley naphtha production was down from 8,593 to 7,476 bbl. and absorption plant output declined from 24,166 to 21,031 bbl. Turner Valley shallow crude dropped from 653 to 643 bbl. and Red Coulee light crude was down from 1,000 to 963 bbl. Wainwright heavy crude declined from 686 to 381 bbl. The output from the Del Bonita wells was down from 445 to 279 bbl. The Dina-Ribstone area produced 250 bbl. in April.

April figures bring the 1940 total for Alberta to 2,284,683 bbl. compared with 1,766,033 bbl. in the same period of 1939.

Turner Valley Potential

Aggregate allowable for 103 Turner Valley crude wells is now 18,081 bbl. a day, with nine wells finished in the lime and testing and another in the lime. Potential production from the 103 wells is estimated 93,500 bbl. a day, making the actual permitted flow about 19 per cent of potential.

New Conservation Measures

New regulations have been announced by the Alberta Conservation Board with a view to restricting the excess demand on storage due to heavy initial production of wells under test. Where a well during official tests produces at a rate higher than the allowable, the allowable shall be retroactive to the data of coming into production, the initial overproduction to be balanced in the succeeding 30 days by underproduction or closing in the well. Where a well during the official tests produces less than the allowable, the latter shall be retroactive only to the day following the last work done on the well prior to testing. Where old wells are reworked, new allowables will be retroactive to the first day of the 48 hours production as supervised by the board prior to taking the 1-in. choke flow. Wells closed in for tests of bottom-hole pressure will be allowed to make up lost production in the ensuing 30 days.

Flow and pressure tests of all naphtha wells in the field will be taken this month, commencing June 10. Tests are to determine 24-hours closed-in pressure and rate of flow at two-thirds of closed pressure, as a basis on which to fix gas-production quotas.

Anglo-Phillips Well

In Section 15-20-3w5, North Turner Valley, Anglo-Phillips' No. 1, LSD 14, was finished at 9,058 ft., 478 ft. in the Madison limestone, encountering some water in the lower porous zone. A core between 9,015 and 9,025 ft. showed good oil saturation and water is apparently coming from below that depth. Cores show a hard lime band just before the water was reached, and it may be possible to take some production from the lower zone. Cement is being run for water shutoff, and if successful, acid treatment will be given. No water was indicated in the upper zone, which yielded at a rate of 850 bbl. a day on drill-stem test.

The completion gives important information regarding the water level in North Turner Valley. The nearest previous completion, Royalite Oil Co.'s No. 43, northeast of the Anglo-Phillips' No. 1, finished at 8,800 ft. without going to the lower lime and is apparently 400 ft. above the water level. This well yielded 2,000 bbl. a day from the upper zone through 1-in. choke. In Southwest Turner Valley, Royal Canadian's No. 3 encountered water in the lower zone after drilling to 4,377 ft., indicating the water level to be 450 ft. higher there than in North Turner Valley. Completion of the Anglo-Phillips well proves an extensive area to the south and east.

Turner Valley Completions

In Section 6-19-2w5 West Central Turner Valley, Kamalta Oils' No. 1 finished at 8,128 ft., some 439 ft. in the lime. Tubing was run and the well started flowing from the lower porous zone under its own pressure. The upper zone, which was cased off, will be perforated for acidizing and production test.

In Section 18-19-2w5 Calmont-Northwest Co.'s No. 1, LSD 3, finished at 7,609 ft., is testing production, with indications of a good well. Davies Petroleums' No. 5, LSD 10, finished at 7,391 ft., is continuing acid treatments after gun perforation.

In Southwest Turner Valley Northwest-Hudson's Bay Co.'s No. 3, LSD 15, Section 8-18-2w5, finished at 8,120 ft., is testing, with indications of a good well.

In Section 17-18-2w5 Royalite Oil Co.'s No. 50, LSD 7, finished at 7,790 ft., is testing after acidizing.

In Section 20-18-2w5, York Oils' No. 3, LSD 3, finished at 8,024 ft., is acidizing and testing after getting a good initial flow.

In Section 32-18-2w5 Royal Canadian Oil Co.'s No. 4, LSD 12, finished at 8,089 ft., has run tubing and is testing.

In North Turner Valley Foothills Oil & Gas Co.'s No. 6, LSD 5, Section 27-20-3w5, got the Madison lime at 7,668 ft. and cemented 7-in. casing at 7,688 ft.

Southwest Field

In Section 8-18-2w5, Southwest Turner Valley, Northwest-Hudson's Bay Co.'s No. 4, LSD 14, is below 793 ft.

In Section 29-18-2w5, Commoll's No. 3, LSD 13, is below 7,501 ft. and getting close to the Home sand.

Steveville Field

In the Steveville field, east of Calgary, Standard of British Columbia's No. 1 Princess, LSD 13, Section 22-20-12w4, finished in the lower Devonian limestone at 6,155 ft., has perforated casing at 3,400 ft. and is testing. Perforation tests will be continued at intervals to the bottom of the hole. H. F. Davies, manager of the Rocky Mountain division of the Standard of California, is in the field with Field Manager John Galloway for the duration of the tests. A major gas horizon with open flow of 65,000,000 ft. a day was encountered in the Devonian at 5,254 ft., but there were numerous smaller oil and gas shows below 3,400 ft.

Vermilion Field

In the Vermilion field, East Central Alberta, Franco-Battleview's No. 3, LSD 13, Section 20-48-5w4, encountered gas between 1,610 and 1,700 ft., with a flow estimated 5,000,000 cu ft. a day. Horizon is the same as that in which Franco-Vermilion's No. 1 encountered a 4,500,000-cu. ft. flow which was increased to 40,000,000 cu. ft. a day on deepening 300 ft. Location is about 4 miles north of Battleview's No. 1 gasser, and the strike proves an extensive field. Vermilalta-Frankview's No. 1, LSD 16, Section 28-50-5w4, is below 250 ft. Apex Oil & Gas Co.'s No. 1 had 136-ft. derrick up on a location a mile north of Franco-Vermilion's No. 1, and is planning at 4,000-ft. test.

Ontario Drilling

In the Malahide field, Elgin County, Ontario, Union Gas Co.'s No. 41, SW cor. Lot 31, Concession 5, Malahide Township, finished at 1,090 ft. with 400,000 cu. ft. a day natural flow. Union's No. 42, S½ Lot 5, Concession 4, finished at 1,095 ft. with 100,000 cu. ft. a day naturally. Central Pipe Line's No. 2, Michael McKnight farm, Lot 11, Concession 4, finished with about 200,000 cu. ft., natural flow.

In the De Clute field, Kent County,

(Continued on Page 95)

The Abercrombie SHEAR-RELIEF Valve is keeping slush pump maintenance costs at rock bottom in oil fields the world over. It's definite that the power end of the pump will build up a pressure which the fluid end, the manifold, the rotary hose, and other pump parts and accessories cannot stand. But it's just as definite that, where a SHEAR-RELIEF Valve is used, the nail will shear at its set pressure and relieve the otherwise dangerous pressure. Proved by more than 7 years of unfailing world-wide service and a consistent increase in sales. We refer you to any user.

FLUID-PISTON SLUSH PUMPS
ABERCROMBIE PUMP CO.
GULF BLDG. HOUSTON, TEX.

SHEAR-RELIEF VALVE

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.	T.	R.	Depth	Status—
Union Oil, No. 1 Austin, Dominguez, Los Angeles	32-	3-13		7,480	flow 1,245 b.d.
Union Oil, No. 2 Austin, Dominguez, Los Angeles	29-	3-13		7,470	O.S. drlg.
Union Oil, No. 14 Carson, Dominguez, Los Angeles	33-	3-13		7,760	sd. sh. drlg.
Shell Oil, No. 104 Reyes, Dominguez, Los Angeles	33-	3-13		7,575	sd. sh. drlg.
Havenstrite, R. E., No. 3 Larronde, Dominguez, L.A.	32-	3-13		7,542	flow 810 b.d.
Seaport Oil, No. 1 Dasteel, Dominguez, Los Angeles	32-	3-13		8,048	O.S. drlg.
Wood-Mellon Oil, No. 1 West, Dominguez, L. A.	31-	3-13		1,997	sd. sh. drlg.
Mission Oil, No. 1 Pierce, Rosecrans, Los Angeles	20-	3-13		7,170	O.S. drlg.
National Oil, No. 1 Wolfe, Rosecrans, Los Angeles	20-	3-13		360	sd. sh. drlg.
So. Cal. Pet., No. 2 Rowena, Rosecrans, Los Angeles	19-	3-13		3,982	sd. sh. drlg.
St. Anthony Oil, No. 3 Gordon, Rosecrans, L. A.	19-	3-13		7,750	flow 2,400 b.d.
Union Oil, No. 42 Rosecrans, Rosecrans, L. A.	19-	3-13		2,164	sd. sh. drlg.
Howard Oil, No. 2 Byrens, Rosecrans, Los Angeles	20-	3-13		7,650	flow 100 b.d.
Chicago Oil, No. 1 Founders, Rosecrans, L. A.	20-	3-13		7,176	cleaning out
Thorley Oil, No. 1 Athens, Rosecrans, Los Angeles	7-	3-13		6,080	sd. sh. drlg.
Inca Oil, No. 1 Union, Rosecrans, Los Angeles	18-	3-13		7,016	mill. 4,840
El Rey Oil, No. 1 Westmore, Athens, Los Angeles	2-	3-14		9,063	P.B. 9,000
Federal Oil, No. 1 Smith, Inglewood, Los Angeles	7-	2-14		6,248	sd. sh. drlg.
Bush Oil, No. 1 Sentous, Inglewood, Los Angeles	17-	2-14		1,893	sd. sh. drlg.
Turf Oil, No. 1 H.R.A., Potrero, Los Angeles	34-	2-14		8,396	sd. sh. drlg.
Tide Water A. O., No. 14 Porter, Aliso Canyon, L. A.	27-	3-16		1,067	sd. sh. drlg.
Tide Water A. O., No. 15 Porter, Aliso Canyon, L. A.	27-	3-16		3,720	sd. sh. drlg.
Tide Water A. O., No. 22 Porter, Aliso Canyon, L. A.	27-	3-16		3,162	sd. sh. drlg.
Brit. Amer. Oil, No. 1 Perkins, Newhall, Los Angeles	14-	3-16		5,110	sd. sh. drlg.
Crighton-Hammon Synd., No. 1 C-H, Newhall, L. A.	17-	3-16		492	sd. sh. drlg.
Barnsdall Oil, No. 9 R.S.F., Newhall, Los Angeles	27-	4-17		7,195	P.B. 7,120
Barnsdall Oil, No. 11 R.S.F., Newhall, Los Angeles	26-	4-17		3,530	sd. sh. drlg.
Barnsdall Oil, No. 12 R.S.F., Newhall, Los Angeles	26-	4-17		302	sd. sh. drlg.
General Pet., No. 2 P.E., Wilmington, Los Angeles	35-	4-13		4,120	P.B. 3,790
Bernstein, Simon, No. 16 Harbor, Wilmington, L. A.	35-	4-13		3,196	sd. sh. drlg.
Continental Corp., No. 6 L.A.C.F.C., Wilmington, L.A.	2-	5-13		2,398	sd. sh. drlg.
Hamarson Oil, No. 3 Harbor, Wilmington, L. A.	35-	4-13		2,785	sd. sh. drlg.
Long Beach Dev., No. 12-W Harbor, Wilmington, L.A.	10-	5-13		3,948	flow 229 b.d.
Long Beach Dev., No. 13-W Harbor, Wilmington, L.A.	3-	5-13		3,930	sd. sh. drlg.
Long Beach Dev., No. 14-W Harbor, Wilmington, L.A.	10-	5-13		2,655	sd. sh. drlg.
M. A. K. Pet., No. 2 Harbor, Wilmington, L. A.	35-	4-13		3,135	sd. sh. drlg.
Power, E. D., No. 17 Harbor, Wilmington, L. A.	35-	4-13		3,199	P.B. 1,833
Union Pacific R. R., No. 135, Wilmington, L. A.	4-	5-13		5,610	swabbing
Union Pacific R. R., No. 138, Wilmington, L. A.	3-	5-13		3,922	cleaning out
Union Pacific R. R., No. 140, Wilmington, L. A.	4-	5-13		4,995	sd. sh. drlg.
Union Pacific R. R., No. 142, Wilmington, L. A.	3-	5-13		2,750	sd. sh. drlg.
Union Pacific R. R., No. 143, Wilmington, L. A.	3-	5-13		2,646	sd. sh. drlg.
Union Pacific R. R., No. 145, Wilmington, L. A.	3-	5-13		3,690	sd. sh. drlg.
Union Pacific R. R., No. 146, Wilmington, L. A.	3-	5-13		2,650	sd. sh. drlg.
Union Pacific R. R., No. 25-E, Wilmington, L. A.	3-	5-13		2,606	sd. sh. drlg.
Vulcan Oil, No. 2-W Harbor, Wilmington, L. A.	32-	4-13		2,191	sd. sh. drlg.
Union Oil, No. 12 Sansinena, Whittier, Los Angeles	31-	2-10		2,240	sd. sh. drlg.
Kern Oil, No. 25 Monterey, Montebello, Los Angeles	2-	2-12		7,770	O.S. drlg.
Kern Oil, No. 31 Monterey, Montebello, Los Angeles	2-	2-12		7,740	rigging up
Kern Oil, No. 42 Monterey, Montebello, Los Angeles	2-	2-12		4,531	sd. sh. drlg.
Kern Oil, No. 3 Taylor, Montebello, Los Angeles	2-	2-12		7,669	will deepen
Kern Oil, No. 5 Mulholland, Montebello, Los Angeles	2-	2-12		7,770	flow 400 b.d.
Kern Oil, No. 3 Eggleston, Montebello, Los Angeles	2-	2-12		7,800	tested wet
Chemical Oil, No. 1 Chemiculture, Montebello, L. A.	12-	2-12		6,282	sd. sh. drlg.
Columbia Oil, No. 1 Schelnik, Montebello, L. A.	3-	2-12		8,154	redrlg. 7,656
Mabee Co., No. 6 Mulholland, Montebello, L. A.	2-	2-12		7,670	will deepen
Montebello Oil, No. 2 Wallace, Montebello, L. A.	3-	2-12		7,610	cmtd. 7,603
Mont. Reservoir Oil, No. 1 Mont., Montebello, L. A.	2-	2-12		7,637	fish tubing
Standard Oil, No. 1 Kaufman, Montebello, L. A.	2-	2-12		7,832	deepening
Texas Co., No. 4 Wilcox, Montebello, Los Angeles	3-	2-12		7,503	cmtd. 7,503
Allied Pet., No. 34 Signal, Long Beach, L. A.	30-	4-12		10,640	rig comp.
Dormax Oil, No. 2 Signal, Long Beach, Los Angeles	30-	4-12		5,342	sd. sh. drlg.
Exeter Oil, No. 3 Olson, Long Beach, Los Angeles	19-	4-12		4,597	idle
Hilldon Oil, No. 2 Flood Control, Long Beach, L. A.	11-	4-13		4,591	pump 180 b.d.
Cal-Mac Oil, No. 3 Oil Exchange, Long Beach, L. A.	19-	4-12		3,365	pump 125 b.d.
Mitchell Oil, No. 1 R.B., Long Beach, Los Angeles	19-	4-12		4,250	sd. sh. drlg.
Bush, S. C., No. 3 Exchange, Long Beach, L. A.	30-	4-12		2,092	sd. sh. drlg.
Tucker, H. M., No. 1 Heath, Buena Park, Orange	34-	3-11		7,170	sd. sh. drlg.
Bartholomae Oil, No. 9 Stern, East Coyote, Orange	22-	3-10		5,791	sd. sh. drlg.
Southwest Expl., No. 29 State, Hunt. Beach, Orange	10-	6-11		2,492	sd. sh. drlg.
Standard Oil, No. 41 Bolsa, Hunt. Beach, Orange	34-	5-11		2,894	sd. sh. drlg.
Owens & Baker, No. 1 Newland, Hunt. B., Orange	12-	6-11		4,005	idle
Termo Co., No. 409-4 State, Hunt. Beach, Orange	10-	6-11		4,719	redrlg. 3,946
Bolsa Chica Oil, No. 6 Wilson, Hunt. Beach, Orange	10-	6-11		2,761	sd. sh. drlg.
South Basin Oil, No. 93 H.B., Hunt. Beach, Orange	2-	6-11		7,590	redrlg. 3,995
Cotninental Oil, No. 43 Bixby, Seal Beach, Orange	11-	5-12		4,393	flow 950 b.d.
United Oil, No. 1 Schimming, Stanton, Orange	25-	4-11		9,313	gr. sd. drlg.
Thompson, M. N., No. 1 Flat, Costa Mesa, Orange	9-	6-10		5,645	idle

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.	T.	R.	Depth	Status—
Cole, F. E., No. 1 Giacomini, Santa Maria, S. Barb.	24-	10-	35	4,806	tested wet
Union Oil, No. 22 Squires, Santa Maria, Santa Barb.	26-	9-	34	3,003	sd. sh. drlg.
Oil Group, Inc., No. 1 Hyland, Summerland, S. Barb.	16-	4-	26	2,550	sd. sh. drlg.
Petrol Corp., No. 3-15 Tognazzini, Gato Ridge, S. B.	15-	8-	32	2,070	sd. sh. drlg.
El Rancho Oil, No. 4 Elkins, Shiells Canyon, Ventura	9-	3-	19	1,681	sd. sh. drlg.
Santa Clara Oil, No. 1 Well, Shiells Vanyon, Ventura	3-	3-	19	1,885	sd. sh. drlg.
Texas Co., No. 139 Shiells, Shiells Canyon, Ventura	4-	3-	19	2,612	cleaning out
Rio Hondo Oil, No. 1 Cosby, Hopper Canyon, Vent.	14-	4-	19	1,248	idle
G. E. Dev., No. 7 Hill, Hopper Canyon, Ventura	13-	4-	19	780	sd. sh. drlg.
Merchants Pet., No. 8 Cochran, Sespe, Ventura	1-	4-	20	2,392	idle
Continental Oil, No. 16 Grubb, San Miguelito, Vent.	24-	3-	24	6,610	flow 2,090 b.d.
C. C. M. Oil, No. 34-B Hobson, Rincon, Ventura	16-	3-	24	929	sd. sh. drlg.
C. C. M. Oil, No. 35-B Hobson, Rincon, Ventura	16-	3-	24	4,299	sd. sh. drlg.
Tide Water A. O., No. 7 V.L.W., Ventura Ave., Vent.	23-	3-	23	7,140	redrlg. 6,360
Tide Water A. O., No. 46 V.L.W., Vent. Ave., Vent.	24-	3-	23	6,592	sd. sh. drlg.
Tide Water A. O., No. 17 McGonigle, Vent. A., Vent.	23-	3-	23	9,357	O.S. drlg.
Tide Water A. O., No. 119 Lloyd, Vent. Ave., Vent.	27-	3-	23	9,180	P.B. 8,838
Tide Water A. O., No. 22 Hartman, Vent Ave., Vent.	22-	3-	23	8,020	hd. sh. drlg.
Tide Water A. O., No. 25 Hartman, Vent. Ave., Vent.	22-	3-	23	6,783	sd. sh. drlg.
Shell Oil, No. 116 Taylor, Ventura Ave., Ventura	29-	3-	23	7,520	flow 2,559 b.d.
Shell Oil, No. 117 Taylor, Ventura Ave., Ventura	21-	3-	23	8,343	sd. sh. drlg.
Shell Oil, No. 119 Taylor, Ventura Ave., Ventura	29-	3-	23	2,790	sd. sh. drlg.
Cal. Alliance Pet., No. 1 Schmidt, Vent. Ave., Vent.	21-	3-	23	8,240	sd. sh. drlg.
British American Oil, No. 1 Barn., Vent. Ave., Vent.	22-	3-	23	7,498	sd. sh. drlg.
British American Oil, No. 10 Hart., Vent. Ave., Vent.	21-	3-	23	5,960	sd. sh. drlg.
Lloyd Corp., No. 5 Dabney, Ventura Ave., Ventura	24-	3-	23	6,692	sd. sh. drlg.
Standard Oil, No. 1 Rideout, Delano gas field, Kern	34-	24-	23	2,498	sd. sh. drlg.
North Kern Oil, No. 1 Ranch, Fowler, Kern	16-	25-	22	5,350	sd. sh. drlg.
General Pet., No. 1 K. P. C., Lost Hills, Kern	16-	26-	22	5,689	sd. sh. drlg.
Franco-Western Oil, No. 19 Front, McKittrick, Kern	8-	30-	22	981	pump 120 b.d.
Freda Oil, No. 3 Laymance, McKittrick, Kern	20-	30-	22	1,242	hd. sh. drlg.
Hoyt, Otis, No. 1 Young, McKittrick, Kern	6-	30-	22	382	sd. sh. drlg.
Burt & Taylor, No. 1 Front, McKittrick, Kern	30-	30-	22	1,851	sd. sh. drlg.
Belridge Oil, No. 7-1 fee, North Belridge, Kern	1-	28-	20	5,850	sd. sh. drlg.
Belridge Oil, No. 10-1 fee, North Belridge, Kern	1-	28-	20	7,162	sd. sh. drlg.
Belridge Oil, No. 3-35 fee, North Belridge, Kern	35-	27-	20	8,409	will redrl.
Continental Oil, No. 4 Result, North Belridge, Kern	36-	27-	20	7,005	sd. sh. drlg.
Tide Water A. O., No. 33-21 Bel., N. Belridge, Kern	21-	27-	20	4,390	sd. sh. drlg.
Texas Co., No. 1 Theta, Shale Hills, Kern	12-	28-	19	3,395	redrlg. 3,070
Bolling Oil, No. 1 Quinn, Jasmine, Kern	14-	25-	27	490	sd. sh. drlg.
Bishop Oil, No. 3 Buchner, Mount Poso, Kern	20-	26-	28	1,605	pump 75 b.d.
Hall-Baker Co., No. 1 Villard, Mount Poso, Kern	18-	26-	28	392	sd. sh. drlg.
Hast Oil, No. 9 Kern, Kern River, Kern	34-	28-	28	392	sd. sh. drlg.
Helm & Smith, No. 20 Kern, Kern River, Kern	34-	28-	28	694	rig to pump
Kern Hills Oil, No. 1 Brown, Kern River, Kern	27-	28-	28	440	O.S. drlg.
Crestmont Oil, No. 3 Coffee, Round Mountain, Kern	8-	28-	29	1,422	P.B. 1,415
Grizzly Bear Oil, No. 4 Kelly, Round Mountain, Kern	6-	28-	29	1,815	cleaning out
Monterey Expl., No. 15 Shell-Duff, Edison, Kern	15-	30-	29	1,731	pump 75 b.d.
Monterey Expl., No. 8 Hershey, Edison, Kern	14-	30-	29	1,399	sd. sh. drlg.
Gooden, Fred, No. 1 Needham, Edison, Kern	21-	30-	29	3,595	sd. sh. drlg.
Goodrum & Vincent, No. 5 S.P., Edison, Kern	31-	29-	30	533	sd. sh. drlg.
Universal Consd., No. 3 Cattani, Arvin, Kern	15-	31-	29	3,762	sd. sh. drlg.
Morton, L. C., No. 1 Jewett, Arvin, Kern	23-	31-	29	6,766	dry; abd.
Western Gulf Oil, No. 45-B, KCL, Fruitvale, Kern	22-	29-	27	4,410	cleaning out
Standard Oil, No. 5 Mushrush, Wasco, Kern	7-	27-	24	8,103	sd. sh. drlg.
Pacific Western Oil, No. 1 Meyer, Wasco, Kern	7-	27-	24	5,990	sd. sh. drlg.
General Pet., No. 5 Caldwell, Rio Bravo, Kern	35-	28-	25	1,191	sd. sh. drlg.
Union Oil, No. 45-34, KCL, Rio Bravo, Kern	34-	28-	25	10,291	sd. sh. drlg.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
B. ck., bottom choke.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits.
Cd. or Crd., cored.
C.D., correct depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg., or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.S.T., drill-stem test.
D.P., drill pipe.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe-line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Recvd., recovered.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtrk. or St., sidetracked.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel-line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas, and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T. ck., top choke.
T.P., tubing pressure.
Tr., tract.
Tstd., tested.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.O.O., waiting on orders.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

Union Oil, No. 56-34, KCL, Rio Bravo, Kern	34-28-25	2,993	sd. sh. drlg.
Union Oil, No. 63-34, KCL, Rio Bravo, Kern	34-28-25	9,984	sd. sh. drlg.
Superior Oil, No. 3-1 Osborn, Rio Bravo, Kern	28-28-25	10,120	sd. sh. drlg.
Superior Oil, No. 3 Burner, Rio Bravo, Kern	27-28-25	11,410	flow 1,478 b.d.
Superior Oil, No. 1 Merrill, Greeley, Kern	1-29-25	11,330	sd. sh. drlg.
Superior Oil, No. 1 Brandt, Greeley, Kern	28-29-26	8,931	hd. sh. drlg.
Standard Oil, No. 11-22, KCL, Greeley, Kern	18-29-26	9,964	sd. sh. drlg.
Standard Oil, No. 12-9, KCL, Greeley, Kern	7-29-26	8,855	sd. sh. drlg.
Standard Oil, No. 12-10, KCL, Greeley, Kern	7-29-26	8,682	sd. sh. drlg.
General Pet., No. 1 Oughton, Greeley, Kern	12-29-25	11,510	flow 1,125 b.d.
Shell Oil, No. 38-20-A, KCL, Ten Section, Kern	20-30-26	8,193	O.S. drlg.
Shell Oil, No. 8-19-A, KCL, Ten Section, Kern	19-30-26	2,475	sd. sh. drlg.
Shell Oil, No. 38-21-B, KCL, Ten Section, Kern	21-30-26	8,204	flow 758 b.d.
Shell Oil, No. 87-29-A, KCL, Ten Section, Kern	31-30-26	5,567	sd. sh. drlg.
Shell Oil, No. 86-12-B, KCL, Strand, Kern	12-30-25	8,499	flow 2,560 b.d.
Ohio Oil, No. 19-E, KCL, Canal, Kern	13-30-25	8,265	tested wet
Richfield Oil, No. 18-28-A, KCL, Tupman, Kern	28-30-25	7,580	sd. sh. drlg.
Richfield Oil, No. 58-28-A, KCL, Tupman, Kern	28-30-25	8,110	sd. sh. drlg.
Richfield Oil, No. 78-30-A, KCL, Tupman, Kern	30-30-25	8,101	sd. sh. drlg.
Richfield Oil, No. 72-32-A, KCL, Tupman, Kern	32-30-25	7,763	sd. sh. drlg.
Richfield Oil, No. 14-33-A, KCL, Tupman, Kern	33-30-25	6,060	sd. sh. drlg.
Richfield Oil, No. 18-33-A, KCL, Tupman, Kern	33-30-25	8,510	sd. sh. drlg.
Richfield Oil, No. 34-33-A, KCL, Tupman, Kern	33-30-25	7,752	sd. sh. drlg.
Richfield Oil, No. 52-33-A, KCL, Tupman, Kern	33-30-25	6,428	fish D.P.
Richfield Oil, No. 54-33-A, KCL, Tupman, Kern	33-30-29	8,060	sd. sh. drlg.
Richfield Oil, No. 34-29-A, KCL, Tupman, Kern	29-30-25	7,750	sd. sh. drlg.
Richfield Oil, No. 38-29-A, KCL, Tupman, Kern	29-30-25	5,461	sd. sh. drlg.
Richfield Oil, No. 276-29-A, KCL, Tupman, Kern	29-30-25	8,579	O.S. drlg.
Richfield Oil, No. 78-28-B, KCL, Cole's Levee, Kern	28-30-25	7,270	sd. sh. drlg.
Richfield Oil, No. 54-4-B, KCL, Cole's Levee, Kern	4-31-25	8,550	sd. sh. drlg.
Standard Oil, No. 20-6, KCL, Cole's Levee, Kern	9-31-25	8,480	sd. sh. drlg.
Ohio Oil, No. 8-F, KCL, Cole's Levee, Kern	11-31-25	9,580	O.S. drlg.
Ohio Oil, No. 9-F, KCL, Cole's Levee, Kern	3-31-25	6,276	sd. sh. drlg.
Foster, R., No. 1 Hollingsworth, Midway-Sun., Kern	22-32-23	1,993	sd. sh. drlg.
Exeter Oil, No. 8 Murphy, Midway-Sunset, Kern	28-32-24	872	sd. sh. drlg.
Signal Oil & Gas, No. 8 Kendon, Midway-Sun., Kern	35-32-23	1,530	sd. sh. drlg.
Shell Oil, No. 45-9 B.V.A., Midway-Sunset, Kern	9-32-25	12,027	dry; abd.
McDonald, Jos., No. 20 Midway, Midway-Sun., Kern	26-31-22	1,532	rig to pump
Ohio Oil, No. 43-3-B, KCL, Paloma, Kern	3-32-26	10,361	cmtd. 9,990
West. Gulf-Texas Co., No. 74-3-A, KCL, Paloma, Kern	3-32-26	10,700	recmtd. 10,026
Oil Scout, Inc., No. 1 Tejon, Comanche Point, Kern	27-32-29	7,008	dry; abd.
Richfield Oil, No. 1 Ranch, Tejon Ranch, Kern	2-10-19	6,001	hd. sh. drlg.
Richfield Oil, No. 2, KCL, Wheeler Ridge, Kern	28-11-20	2,463	hd. sd. drlg.
Erickson-Swanson, No. 2 Gravender, Kingsb., Fresno	22-16-22	830	hd. sh. drlg.
Logan, J. E., No. 44 Yearout, Cantua, Fresno	26-16-14	5,835	sd. sh. drlg.
Jergins Trust, No. 1 Cheney, Panocho Creek, Fresno	29-14-13	9,225	P.B. 7,200
Texas Co., No. 1 S.P., Turk Anticline, Fresno	23-17-15	10,116	tested wet
Shell Oil, No. 45-2, E. Coalinga, Fresno	2-20-15	3,745	pump 430 b.d.
Standard Oil, No. 53-19-B fee, N.E. Coalinga, Fresno	19-19-16	8,275	flow 2,178 b.d.
Standard Oil, No. 68-19-B fee, N.E. Coalinga, Fresno	19-19-16	8,270	completing
Standard Oil, No. 77-19-B fee, N.E. Coalinga, Fresno	19-19-16	5,991	sd. sh. drlg.
Standard Oil, No. 82-19-B fee, N.E. Coalinga, Fresno	19-19-16	7,965	sd. sh. drlg.
Standard Oil, No. 86-19-B fee, N.E. Coalinga, Fresno	19-19-16	5,834	sd. sh. drlg.
Amerada Pet., No. 1-20-B Ewing, N.E. Coal., Fresno	20-19-16	8,203	tail piece
Superior Oil, No. 5 Husong, N.E. Coalinga, Fresno	18-19-16	8,245	flow 1,162 b.d.
Pure Oil, No. 44-30-B Schwinn, N.E. Coalinga, Fresno	30-19-16	7,591	br. sh. drlg.
Wilshire Oil, No. 62-30-B, N.E. Coalinga, Fresno	30-19-16	8,202	hd. sd. drlg.
Union Oil, No. 55-18 Cook, N.E. Coalinga, Fresno	18-19-16	5,080	resume work
Bandini Pet., No. 71-30-B, N.E. Coalinga, Fresno	30-19-16	7,652	sd. sh. drlg.
Lytle, R. S., agent, No. 68-18-F, S.E. Coal., Fresno	18-20-16	7,630	O.S. drlg.
Lytle, R. S., agent, No. 77-18-F, S.E. Coal., Fresno	18-20-16	6,990	sd. sh. drlg.
Lytle, R. S., agent, No. 82-18-F, S.E. Coal., Fresno	18-20-16	6,031	sd. sh. drlg.
Texas Co., No. 5 Exeter, S.E. Coalinga, Fresno	6-20-16	612	sd. sh. drlg.
Univ. Consd. Oil, No. 72-24-C, S.E. Coalinga, Fresno	24-20-15	7,093	sd. sh. drlg.
Standard Oil, No. 68-13-C fee, S.E. Coalinga, Fresno	13-20-15	6,671	sd. sh. drlg.
Standard Oil, No. 88-13-C fee, S.E. Coalinga, Fresno	13-20-15	7,395	sd. sh. drlg.
Standard Oil, No. 22-17-F fee, S.E. Coalinga, Fresno	17-20-16	7,198	sd. sh. drlg.
Standard Oil, No. 1-19-F fee, S.E. Coalinga, Fresno	19-20-16	7,280	br. sh. drlg.
Standard Oil, No. 51-19-F fee, S.E. Coalinga, Fresno	19-20-16	5,976	sd. sh. drlg.
Superior Oil, No. 3-B Cagle, S.E. Coalinga, Fresno	6-20-16	8,228	flow 1,240 b.d.
Union Oil, No. 9 King, Kettleman N. Dome, Fresno	29-21-17	10,200	sd. sh. drlg.
K. N. D. A., No. 322-18-J, Kettleman N. Dome, Fres.	18-21-17	9,140	sd. sh. drlg.
K. N. D. A., No. 23-20-J, Kettleman N. Dome, Fresno	20-21-17	8,091	sd. sh. drlg.
K. N. D. A., No. 36-20-J, Kettleman N. Dome, Fresno	20-21-17	8,700	fish. casing
K. N. D. A., No. 4-16-Q, Kettleman N. Dome, Fresno	16-22-18	8,250	flow 894 b.d.
K. N. D. A., No. 27-26-Q, Kettleman N. Dome, Kings	26-22-18	5,650	br. sh. drlg.
K. N. D. A., No. 58-26-Q, Kettleman N. Dome, Kings	26-22-18	6,755	br. sh. drlg.
Tide Water, No. 1 Westslope, Pyramid Hills, Kings	20-24-18	2,051	P.B. 945
Standard Oil, No. 321-29-J, Kettleman N. Dome, Fres.	29-21-17	10,490	sd. sh. drlg.
Standard Oil, No. 334-29-J, Kettleman N. Dome, Fres.	29-21-17	9,581	sd. sh. drlg.
Tide Water A. O., No. 35-22 Daniel, Trico, Tulare	22-24-23	3,245	sd. sh. drlg.
Cal. Fuel Oil, No. 3 Alberta, Huasna, S. L. Obispo	5-32-13	2,560	sd. sh. drlg.
Superior Oil, No. 1 Tar Spgs., Huasna, S. L. Obispo	24-32-14	1,162	sd. sh. drlg.

OKLAHOMA

Week Ended June 1

NORTHERN OKLAHOMA

Beckham County

Fred Coogan's No. 1 Kinchen, SE SE SE Sec. 4-9-25w. Dolo. 3,260 ft.; T.D. 3,714 ft.; P.B. 3,698 ft.; est. 12 B.O. and 40 B.W.P.D.

Caddo County

Sinclair Prairie Oil Co.'s No. 1 Groman, SW NW NW Sec. 1-16-13w, Wlx. 9,179 ft.; sd. 10,074 ft.; cd. 10,871-75 ft.; N. S.; Arb. 10,922 ft.; T.D. 11,026 ft.; P.B. 9,370 ft.; C.O. at 6,600 ft.; W. 100 ft. blk. O.I.H.; to P.B. to 2,450 ft. and test Pont, cong.

Creek County

D. E. Demsey's No. 1 Marrs, NE NW SE Sec. 29-18-8. Drlg. 935 ft.

Indo Oil Co.'s No. 1 Slick, NW NW NW Sec. 1-16-9. S.O. 1,145-78 ft.; T.D. in Dtchr. 2,919 ft.; H.F.O.

Dewey County

Magnolia Pet. Co.'s No. 1 Fiekes, C SW SW Sec. 31-18-14w. D.S.T. rec. mud at 7,718 ft.; T.D. 9,475 ft.; ran tbg. to 6,463 ft. to cmt. cvgs.; 2,700 lb. P. while S.I.; set pig. 9,200 ft.; drld. out to 6,920 ft.; to run pipe.

Garfield County

Champlin Ref. Co.'s No. 1 Kunkel, C E½ SE NW Sec. 23-23-6w. Lytn. 5,048 ft.; cd. dry 5,057-72 ft.; drlg. 5,890 ft.

Hughes County

J. W. Boydston's No. 1 Robstein, C NW SE Sec. 11-6-9. S.D. 1,200 ft.

Hall & Jordan's No. 1-A Barker, SE SE SW Sec. 3-8-9. S.O. in sd. 2,074 ft.; T. D. 2,109 ft.; est. 2 B.O.; S.D.

Morgan-Gulf Prod. Co.'s No. 1 Diamond, C E½ NW SE Sec. 33-9-9. At 3,390 ft. had 1,400 ft. wtr. and 800 ft. O.I.H.; drlg. 4,182 ft.

Kay County

Malarnee Oil Co.'s No. 1 Harris, C SW NE Sec. 14-25-1. Miss. 4,050 ft.; chat with S.O. 4,063-4,105 ft.; wtr. 4,433-40 ft., T.D.; P.B. 4,020 ft.

Kingfisher County

Olsen Drlg. Co.'s No. 1 Geis, C NE SW Sec. 15-18-9w; (O.W.D.D.). O.T.D. 8,507 ft.; T.D. 9,404 ft.; S.D.O.

Phillips Pet. Co.'s No. 1 Grape, C NW SE Sec. 30-18-5w. Layton 5,600 ft.; O.S.W. 4,146 ft.; Miss. 6,670 ft.; D.P. stk.

Kiowa County

Carter's No. 1 Hinton, SE SE SE Sec. 1-7-17w. Drlg. 2,460 ft.

C. H. Marshall's No. 1 Pottchin, NE NW NW Sec. 28-7-18w. Drlg. 2,165 ft.

Southwestern Okla. O. & G. Co.'s No. 2 Foltz, NW SE SE Sec. 10-6-18w. T.D. 1,360 ft.; S.D.

Lincoln County

Anderson-Prichard's No. 1 Smith, SE SW NE Sec. 18-15-5. Drlg. 4,075 ft.

Fields & Nagle's No. 1 Alspaugh, SW SE NW Sec. 35-15-6. Rng. csg. 3,170 ft.

Logan County

Eason Oil Co.'s No. 1 Wells, NE NW NE Sec. 15-16-2w. Drlg. 3,020 ft.

Keryn Oil Co.'s No. 1 Cavanaugh, C W½ SW NW Sec. 1-15-4w. Drlg. 5,305 ft.

Keryn Oil Co.'s No. 1 Chitwood, NE NE SW Sec. 15-16-4w. Drlg. 6,263 ft.

McIntosh County

Phillips' No. 1 Blankenship, C SW NW Sec. 33-10-13. Hntn. 3,691 ft.; Vla. 3,806 ft.; drlg. 3,883 ft.

Muskogee County

R. Garrett's No. 1 Escoe, SW SW SE Sec. 16-13-17. S.D. 1,665 ft.; est. 2,000,000 cu. ft. gas.

Noble County

Helmerich & Payne's No. 1 Fireshaker, SE SE NE Sec. 11-24-3. Cg. Vla. 3,969-74 ft.

Okfuskee County

Burke-Greis' No. 1 Dew, NE NE NE Sec. 9-12-9. Drlg. 2,815 ft.

C. A. Yoakum's No. 1 Long, C SW SE Sec. 34-12-9. T.D. 3,826 ft.; ga. 7,000,000 cu. ft. gas.

Payne County

Cities Service Oil Co.'s No. 1 Sinnett, SE SE SW Sec. 14-20-4. Drlg. 2,580 ft.

Comoil-Haskins' No. 1 Meyer, NW SE SE Sec. 17-17-6. W.O.C. 2,876 ft.

Devonian Oil Co.'s No. 1-A Scott, SE SE NE Sec. 19-18-5. Miss. 3,698 ft.; drlg. 3,879 ft.

Pontotoc County

Crescent Oil Co.'s No. 2 Thompson, NE NW SW Sec. 29-3-4. S.D. 671 ft.

Pottawatomie County

Alma Oil Co.'s No. 1 Harrington, NW SE NW Sec. 24-9-4. T.D. 4,510 ft.; P.B. 4,430 ft.; F. 75 B.O. in 24 hrs.

J. F. Smith's No. 1-A McKnown, SE SW NW Sec. 25-8-4. T.D. 3,967 ft.; H.F.W.; sqze.

Taber et al's No. 1 McKinney, C E½ SE SW Sec. 11-10-4. Hntn. 4,750 ft.; Vla. 4,908 ft.; T.D. 5,088 ft.; D.&A.

Thompson Bros.' No. 1 L. Truesdale, SE SE NW Sec. 31-8-5. Drlg. 2,970 ft.

Seminole County

Murta et al's No. 1 Harber, C W½ NE SE Sec. 4-10-6. Cg. 4,252 ft.

Washita County

Continental Oil Co.'s No. 1 School ld., C NE Sec. 16-8-16w. Gr. wsh. 3,005 ft., drlg. 6,689 ft.

SOUTHERN OKLAHOMA

Atoka County

Kirksey's No. 1 Baskett, SW SE SE Sec. 7-3s-10e. Sdy. L. 470-80 ft.; S.O.; drlg. 700 ft.

Scrivner et al's No. 1 Plettner, NW NW NE Sec. 36-3s-13. Drlg. 1,300 ft.

Comanche County

Jenkins' No. 1 Whitehead, NE cor. Sec. 3-1s-13w. T.D. 505 ft.; D.&A.

W. I. Wynn's No. 1 Lowe, SE NW NW Sec. 7-1n-10w. Est. 15 B.O.P.D.; T.D. 256 ft.

Cotton County

Scott's No. 1 Masonic Home, NW NW SW Sec. 13-4s-13w. Drlg. 1,350 ft.

Marshall County

Johnson et al's No. 1 Godfrey, SW SE NE Sec. 14-6s-6e. Vla. 2,627 ft.; S.S.O.; T.D. 4,582 ft.; P.B. 3,809 ft.; drlg. 4,703 ft.

May Oil Corp.'s No. 1 Sacrea, SW NE SW Sec. 17-5-5. Sd. and S.G. 1,023-27 ft.; blk. sh. 1,033-37 ft.; gas sd. 1,120-ft.; est. 6,000,000 cu. ft. gas; T.D. 1,132 ft.; drld. plug and C.O. to btm.; S.D.

Stephens County

Edwin Bristow's No. 1 Damron, SE NW SW Sec. 25-2s-6w. T.D. 1,545 ft.; P.B. 1,505 ft.; acdz.; rec. S.W.; S.D.

Jackson's No. 1 Marshall, SE NE NE Sec. 1-1s-6w. T.D. 2,575 ft. in sh.; S.D.

Tillman County

Gulf Oil Corp.'s No. 1 Owen, NE NE NE Sec. 27-4s-15w. Drlg. 3,370 ft.

F. W. Johnson's No. 1 Longacre, NE NE SE Sec. 32-2S-17w. T.D. 3,268 ft.; F. 170 B.O., 30 B.W.P.D.; gr. 42°; drld. cmt. and rec. wtr.; rng. tbg. with pkr. to test.

Kirksey et al's No. 1 Garner, NE SW SE Sec. 24-1n-17w. S.D. 622 ft.; reprs.

KANSAS

Week Ended June 1 (Descriptions are East unless marked otherwise)

Barber County

Sinclair-Prairie Oil Co.'s No. 1 Binning, C S½ SE SW Sec. 26-32-13w. Drlg. 2,265 ft.

Barton County

Bartlett & Crum's No. 1 Hulme, C E½ SE NE Sec. 9-20-12w. Drlg. 1,221 ft.

C. L. Carlock's No. 1 Jenke, C W½ NW NW Sec. 7-18-11w. Drlg. 3,034 ft.

Champlin Ref. Co.'s No. 1 Fiege, CEL SE NW Sec. 22-20-11w. Drlg. 3,095 ft.

Gulf et al's No. 1 Sander, CNL SW SE Sec. 30-13-10w. W.O.C. 215 ft.

Butler County

J. H. Wagoner's No. 1-A Ramsey, SW NW SE Sec. 8-24-5. Pay 2,088-93 ft.; T.D. 2,096 ft.; P. 18 B.O.P.D.

Ralph Wixon's No. 3 Bolin, SE SW NE Sec. 1-27-6. Drlg. 2,838 ft.

Cowley County

Barwick & Sheridan's No. 1 Warren, C W½ NW NW Sec. 18-35-6. U.R. 8-in. 1,938 ft.

Foster Oil Co.'s No. 2 Howard, E½ SW SW Sec. 8-34-4. Drlg. 2,505 ft.

McKnab's No. 1 Lemert, CWL NW SE Sec. 11-34-4. Drlg. 1,350 ft.

McKnab's No. 1 Snyder, C W½ NW NW Sec. 15-34-3. Bart. 3,270-80 ft.; Miss. 3,291 ft.; H.F.W.

Markey & Mission's No. 1-A Hunt, SW SW NE Sec. 16-34-5. T.D. 1,756 ft.; killed gas; S.D. 2,600 ft.

I. W. Murfin's No. 1 Jarvis, N½ SW NE Sec. 19-31-5. U.R. 1,483 ft.

E. B. Shawver's No. 1-B Widener, C S½ SE NW Sec. 11-30-4. Miss. 2,825-40 ft.; T.D. 3,021 ft.; ran 7-in. lnr. at 3,025 ft.; S.D.

Stewart et al's No. 1-A Ehmke, C W½ NW NW Sec. 14-32-3. Drlg. 438 ft.

Dickinson County

Midland Oil Co.'s No. 1 Haines, SE SW SW Sec. 23-16-4. S.D. 1,790 ft.

Douglas County

Keryn Oil Co.'s No. 1 Wise, C SE SW Sec. 28-12-20. T.D. 1,588 ft. in Vla.; H.F.W.; D.&A.

Ellis County

Gulf et al's No. 1 Sander, CWL SW SE Sec. 30-13-16w. Tpka. 2,940 ft.; cd. 3,118-23 ft.; S.O.; drlg. 3,345 ft.

Ellsworth County

Aylward Prod. Co.'s No. 1 Haska, CEL SE SE Sec. 6-16-10w. Lans. 2,956 ft.; Arb. 3,273-75 ft.; T.D. 3,292 ft.; F. 4 B.O.P.H.

Moore's No. 1 Little, C S½ SE NE Sec. 30-16-10w. C.O. 2,790 ft.

Pryor & Lockhart's No. 1 Stratman, C W½ NW NW Sec. 1-17-10w. Lans. 2,937 ft.; Arb. 3,278 ft.; T.D. 3,297 ft.; comp. for 3,000 B.O.P.D.

Sharon Drlg. Co.'s No. 1 Norotny, C N½ NW NE Sec. 32-16-10w. Arb. 3,292 ft.; S.O. 3,299 ft.; T.D. 3,318 ft.; 400 ft. O.I.H.

Greenwood County

Ashlock et al's No. 2-A Lindemood, NE NW SW Sec. 7-25-13. Pay 1,613-20 ft., T.D.; rng. csg.

Johnson County

McCain et al's No. 1 Doan, CEL NW SE Sec. 34-12-22. S.D. 1,500 ft.

Kearny County

Stanolind O. & G. Co.'s No. 1 Judd, C SE SE Sec. 15-21-38w. Rmg. 1,085 ft.

Kingman County

Gaddis et al's No. 1-A Shannon, CEL SE SW Sec. 11-27-10w. Lans. 3,493 ft.; D.S.T. 4,013-48 ft.; rec. mud&sh.

McPherson County

Aladdin Pet. Co.'s No. 1 Bitikofer, CNL NE NW Sec. 1-20-1w. Lans. 2,315 ft.; Miss. 2,885 ft.; ga. 3,000,000 cu. ft. gas; F. 4 B.O.P.H.

H. & M. Drlg. Co.'s No. 1 Swenson, S½ SW NE Sec. 9-18-4w. Drlg. 2,885 ft.

Marion County

Harrington & Lorieaux's No. 1 Belton, SE SE NE Sec. 30-17-4. Miss. 2,398 ft.; pay 2,412-15 ft.; T.D. 2,420 ft.; P. 800 B.O. in 24 hrs.

H. H. Royer's No. 1 Kroch, NE NE NW Sec. 28-18-4. O.T.D. 2,452 ft.; T.D. 2,464 ft., in Miss.; N.S.; C.O. 2,462 ft.

Pawnee County

Magnolia's No. 1 Smith, CEL NE NE Sec. 12-21-16w. W.O.C. 115 ft.

Reno County

Dutton et al's No. 1 Green, SE SE SE Sec. 8-23-4w. Fsg. 2,622 ft.

Rice County

C. L. Carlock's No. 1 Conrad, C W½ SW NE Sec. 15-20-6w. Lans. 2,850 ft.; R. U.S.T. 3,314 ft.
Clyde Pulse's No. 1 Baker, CSL SW SW Sec. 33-20-6w. Drlg. 2,938 ft.

Rooks County

Cities Service Oil Co.'s No. 1 Hansen, SE SE NW Sec. 15-6-19w. Drlg. 1,655 ft.
Mitchell Drlg. Co.'s No. 1 Vererka, CSL SE SE Sec. 21-8-19w. Tpka. 2,783 ft; Lans. 3,174 ft.; rng. csg.
Wakefield et al's No. 1 Diehle, C N½ NW NW Sec. 4-9-17w. Drlg. 2,260 ft.

Russell County

Cities Service Oil Co.'s No. 1 Rochester, SE SE NE Sec. 11-13-15w. Lans. 2,953 ft.; S.O. 2,997-99 ft. and 3,252 ft.
Gussman's No. 1 Mudd, CWL NW NE Sec. 16-15-15w. Drlg. 230 ft.
Haynes et al's No. 1 Driscoll, CNL SE SW Sec. 30-15-11w. U.R. 2,160 ft.
Jones Bros.' No. 1 Mahoney, CSL SW SW Sec. 8-14-12w. Drlg. 317 ft.

Sedgwick County

G. A. Fuller's No. 1 Stilt, CSL SE NE sec. 21-27-1w. S.S.O. 2,678 ft.; incr. at 2,798-2,806 ft.; P. 2 B.O. and 20 B.W. P.H.; pot. 23 B.O.; R.U. to D.D.

Schermerhorn Oil Co.'s No. 1 Sanders, NE NW SE Sec. 2-25-2. Miss. 2,835 ft.; S.O.; T.D. 2,887 ft.

Woodson County

Cooper's No. 1 Sowder, SE SE NW Sec. 31-25-14. Drlg. 457 ft.

MISSOURI

Livingston County

Chillicothe Syndicate's No. 1 Linton, C W½ SE Sec. 15-56-25w. S.D. csg. 762 ft.

Platte County

Roach-Vincent et al's No. 1 Dillingham, C NE SW Sec. 16-53-34w. Set 8-in. csg. 1,063 ft.; drlg. 1,242 ft.

NEBRASKA

Richardson County

Forest City Basin Synd.'s No. 1 Windle, SE NE SE Sec. 3-1n-15e. R.U.
Pawnee Royalty Co.'s No. 1 Boice, CSL N½ NE NE Sec. 18-1n-16e. O.W.D.D.; Vla. 2,911 ft.; Arbuckle 3,268-3,300 ft., T.D.; plugged back to Hunton lime at 2,279-87 ft. S. 25 B.O.P.H. for 8 hrs.
Uhri Oil Co.'s No. 1 Stauffer, SW SW NE 9-1n-14e. S.D. 1,660 ft.

ARKANSAS

Clark County

J. H. Coker and J. P. Grieves' No. 1 C. McClellan, 330 ft. NW cor. NW SE Sec. 11-20-21. S.D. 1,326 ft.; repr. drk.
Coker Oil Corp.'s No. 4 H. H. and H. C. Cabe, 100 ft. E of No. 2, Sec. 5-10s-21w. Set 8¼-in. csg. 20 ft.; reported S.O. 283-87 ft.; S.D.; W.O.; T.D. 480 ft.

Columbia County

Barnsdall Oil Co.'s No. 1 El Dorado & Wesson R. R. Co., C NW SW Sec. 5-19-18. Set 10¾-in. csg. 2,525 ft.; drlg. 4,417 ft.
Mid-Continent Pet. Corp.'s No. 1 J. Keith, C SW NW Sec. 16-18-22. Set 16-in. csg. 397 ft.; drlg. 4,135 ft.
Placid Oil Co.'s No. 1-B J. W. Booth, C SE SE Sec. 19-17-19. R.U.
Southwood Oil Co.'s No. 2 H. C. Couch, C S½ SW SW and S½ SE SW Sec. 23-17-20. Drlg. 6,027 ft.
Tide Water Asso. Oil Co. and Seaboard Oil Co.'s No. 2 C. H. Murphy et al, C SE NE Sec. 14-18-19. Set 9⅝-in. csg. 2,500 ft.; drlg. 7,025 ft.
Tide Water Asso. Oil Co. and Seaboard Oil Co.'s No. 1 Talley, C SE NW Sec. 14-18-19. Set 9⅝-in. csg. 2,487 ft.; drlg. 6,720 ft.
G. H. Vaughn's No. 1 J. M. Talley, C N½ N½ SE Sec. 15-18-19. Drlg. 7,495 ft.

Dallas County

H. H. McBride et al's No. 1 Southern Kraft Corp., C SE SW Sec. 16-2-16. R.U.

Faulkner County

Cato Oil Co., Inc.'s No. 1 R. R. Harrell, 330 ft. SE cor. SE SW Sec. 35-4n-12w. T.D. 2,438 ft.; U.R. csg. and set 7-in. csg. 2,370 ft.; drlg. L.&sh. 2,644 ft.

Lafayette County

Atlantic Ref. Co.'s No. 1 Bodcaw Lbr. Co., Sec. 29-17-23. Set 16-in. csg. 341 ft.; set 9⅝-in. 4,222 ft.; cd. 7,308-16 ft.; S.O.; T. Bknr. 8,895 ft.; T. Smkvr. 9,039 ft.; cd. hd. dolo.&dnse.&por. ool. L. 9,041-57 ft.; slight gas odor and ether cut; cd. hd. gr. ool. L. with por. strks. 9,057-77 ft.; sulf. odor.
East Texas Ref. Co. et al's No. 2 E. P. Davis, 525 ft. N, 660 ft. W, SE cor. NW NE Sec. 19-16-23. Set 5½-in. csg. 3,399 ft.; T.D. 3,480 ft.
J. & J. Oil Co.'s No. 1 J. E. Barnes, 345 ft. W, 615 ft. N, SE cor. Sec. 4-16-24. Set 10¾-in. csg. 218 ft.; T.D. 1,731 ft.; S.D.; wtr. sd.

Lonoke County

Lunnon Howell & Ford's No. 1 City of Cabot, C NE Lot 1, Blk. 6, Sec. 18-4n-w. Set 4¾-in. csg. 878 ft.; drlg. 1,146 ft.

J. F. Russell's No. 1 J. T. Gunter, 440 ft. N, 577 ft. W, SE cor. Sec. 17-5n-10w. Drld. sd. S.S.O. 2,231-45 ft.; S.D. 2,312 ft.; installing drlg. line.

Miller County

K. E. Jennings and J. J. Oil Co.'s No. 1 H. T. Wood, 520 ft. S, 255 ft. W, NE cor. Sec. 33-18-28. T.D. 4,547 ft.; S.D.; W.O.
Standard Oil Co. of La.'s No. 1 W. P. Sturgis, 660 ft. S and W, C Sec. 1-17-27. Set 9⅝-in. csg. 2,497 ft.; T. Bknr. 8,948 ft.; T. Smkvr. L. 9,306 ft.; cd. dnse. L., odor O.&G. 9,321-31 ft.; cd. 9,376-91 ft.; slight odor; cd. 9,391-9,406 ft.; rec. 5 ft. hd. dnse. L.; cd. 9,406-21 ft.; rec. 2 ft. hd. dnse. L.

Ouachita County

Sam Richardson & Co., Inc.'s No. 10 J. Goodwin, 200 ft. N, 330 ft. W, SE cor. NE SW Sec. 32-15-15. Ran elec. sur. 4,320 ft.; S.D.; W.O.

Saline County

A. W. Givens' No. 1 Williams, 375 ft. S, 420 ft. E, NW cor. NE NE Sec. 18-3s-15w. Set 6-in. csg. 500 ft.; S.D. 550 ft.
Tedford Drlg. Co. et al's No. 1 Cunningham, C SW NE Sec. 31-3s-15w. R.U.

Sevier County

R. A. McArthur's No. 1 Bell est., 20 ft. SE cor. SE SW Sec. 29-9s-32w. S.D. 785 ft.

Union County

Berg & Laney's No. 1 Cutrer, 150 ft. N, 660 ft. W, SE cor. NW SW Sec. 21-17-14. Cd. 2,727-28 ft.; rec. 7-in. por. sd.; cd. 2,728-35 ft.; rec. 7½ ft. soft por. sd., salty taste; drlg. by fish 350 ft.; T.D. 3,370 ft.; set 5½-in. csg. 2,771 ft.; perf. 2,702-05 ft.; bailed down 1,000 ft. and tstd. S.W.; recmtd. perf. 2,601-03 ft. and reperf. 2,572-74 ft.; T.D. 2,575 ft.; fsg.
J. H. Coker and J. P. Grieves et al's No. 1 C. L. Smith, 330 ft. SW cor. NE NW Sec. 32-17-14. Set 10¾-in. csg. 225 ft.; drlg. 3,031 ft.
Fohs Oil Co.'s No. 1-A Grace, 660 ft. N, 330 ft. W, SE cor. SW SE Sec. 31-17-14. T. sd. 3,436 ft.; cg. 3,748 ft.
Marine Oil Co.'s No. 5-B W. B. Thompson, 250 ft. S, 200 ft. W, NE cor. SE SW Sec. 3-18-13. Set 10-in. csg. 140 ft.; Set 7-in. csg. 3,538 ft.; T.D. 3,573 ft.; ran elec. log.
Phillips Pet. Co.'s No. 1 C. H. Murphy, 165 ft. S, 10 ft. E, NW cor. S½ Lot 2, NW Sec. 19-18-17. Set 9⅝-in. csg. 1,878 ft.; drlg. 4,200 ft.
Standard Oil Co. of La.'s No. 1 D. A. Zimmerman, 660 ft. SE cor. SE SE Sec. 29-18s-16w. Drk. and pits.

LOUISIANA

NORTH LOUISIANA

Bienville Parish

Ark. La. Gas Co.'s No. 1 Wimberly, 661 ft. N, 50 ft. W, C Sec. 15-16-10. Set 9⅝-in. csg. 1,252 ft.; drlg. sh.&L. 4,077 ft.

Bossier Parish

R. L. Reese et al's No. 1 Bellevue Ld. Co., 170 ft. E, 365 ft. N, C Sec. 27-20-11. Set 10-in. csg. 100 ft.

Caddo Parish

C. J. Brown's No. 3 Muslow, Sec. 5-20-15. Set 10-in. csg. 60 ft.; set 6⅝-in. csg. 1,410 ft.; W.O.C.
L. M. Calhoun's No. 2 Caddo O. & M. Co., Sec. 12-20-16. Set 10-in. csg. 60 ft.; drlg. sh.&sd. 1,020 ft.
D. T. Cauble's No. 1 Darnell, Sec. 17-22-16. Set 10-in. csg. 80 ft.; sd. 3,002-10 ft. and 3,012-52 ft.; S.O.; T.D. 3,204 ft.; set 5½-in. csg.; perf. 3,096-92 ft.; tstd. dry; perf. 3,085-90 ft.; tstd. dry; shot csg. with 9 qts. nitroglycerin and tstd. S.W.; W.O.
Cooper Oil Co.'s No. 2 Stiles, Sec. 33-20-16. Set 6-in. csg. 1,568 ft.; W.O.C. 1,661 ft.
Davidson & Brown's No. 1 Wells, Sec. 10-21-15. Set 8-in. csg. 1,597 ft.; acd. with 4,000 gal.; pmpd.; S.O. 1,789 ft.; T.D. 3,000 ft.; set 5½-in. csg.; acd. with 3,000 gal.; tstd. S.W.; S.O.; pld. csg. and P.B. 2,006 ft.; tstd. S.W.; P.B. 1,875 ft. and tstd. S.W.; pmpg. S.W.
Claud Ferguson's No. 1 Dickson, Sec. 3-20-15. Set 10-in. csg. 40 ft.; S.D. 660 ft.
L. Halbfass' No. 1-B Knight Oil & Ld. Co., Sec. 1-21-16. Set 10-in. csg. 60 ft.; drlg. sh. 915 ft.
F. G. Holcomb's No. 1 Sims, Sec. 3-20-16. Set 10-in. csg. 75 ft.
C. H. Lyons et al's No. 1 Ferris, 750 ft. N, 30 ft. E, SW cor. Sec. 35-18-14. Set 9-in. csg. 1,213 ft.; cg. 5,558 ft.
P. N. McCullough's No. 1 Rudderdorf, Sec. 11-20-16. Set 5½-in. csg. 1,406 ft. acd. 4,000 gal.; tstd. S.W.; S.O.; S.D. W.O. 1,609 ft.
McDonald & Campbell's No. 15 Youree, Sec. 13-20-15. Set 6⅝-in. csg. 2,264 ft.; T.D. 2,266 ft.; W.O.C.
Marion Oil Co.'s No. 7 Hart, Sec. 22-21-16. R.U.
E. O. Mitchell's No. 1 fee, Sec. 12-20-16. Set 5½-in. csg. 1,373 ft.; acd. with 3,000 gal.; T.D. 1,528 ft.; W.O.S.R.
Baxter Moody's No. 1 Muslow, Sec. 5-20-15. Set 6⅝-in. csg. 1,414 ft.; acd. with 4,000 gal.; W.O.S.R.; T.D. 1,563 ft.
Providence Oil Co.'s No. 6 Bostwick, Sec. 13-22-16. Set 7-in. csg. 2,624 ft.
Sklar Oil Co.'s No. 1 Cheshire, Sec. 32-21-15. Set 5½-in. csg. 1,328 ft.; tstg. 1,385 ft.
Stanolind O. & G. Co.'s No. 2 Dorian, Sec. 18-21-15. Set 5½-in. csg. 1,535 ft.; acd. 1,700 ft.; W.O.S.R.
Stanolind O. & G. Co.'s No. 1 R. T. Glassell, Sec. 25-21-15. R.U.
Stanolind O. & G. Co.'s No. 1 Noel est., Sec. 25-21-15. Set 8⅝-in. csg. 64 ft.; set 5½-in. csg. 1,580 ft.; 1,550 ft. W. O.S.R.
L. L. Sugar's No. 1-A Sample, Sec. 31-21-15. Set 10-in. csg. 60 ft.; drlg. 300 ft.
Jack Terrell's No. 1 Welch, Sec. 3-20-16. Set 4½-in. csg. 1,434 ft.; T.D. 1,540 ft. acd. 4,000 gal.; tstd. S.O. and S.W.
Texas Co.'s No. 1 Cullinan fee, Sec. 32-21-15. Drlg. 100 ft.
Texas Co.'s No. 10 J. F. Herndon, Sec. 14-21-15. Set 6⅝-in. csg. 1,484 ft.; acd. with 4,000 gal.; pmpg. S.W.; S.O. 1,672 ft.
Texas Co.'s No. 11 A. Herndon, Sec. 14-21-15. Set 10-in. csg. 38 ft.; 6⅝-in. csg. 1,478 ft.; T.D. 1,481 ft.; W.O.C.
Texas Co.'s No. 1 La. Co. fee, Sec. 1-20-16. T.D. 1,672 ft.; tstd. S.W. 1,473 ft.; set short string 5-in. csg. 1,508 ft.; tstd. S.W.; S.O.; T.D. 1,672 ft.
Thomas & Mack's No. 1 Burton, Sec. 1-20-16. Set 10-in. csg. 40 ft.; 6⅝-in. csg. 1,375 ft.; W.O.C.

Catahoula Parish

Continental Oil Co.'s No. 1 Tensas, C N½ SW SW Sec. 12-9-7e. Set 10¾-in. csg. 1,120 ft.; drlg. L.&sh. 8,072 ft.

Claiborne Parish

Ohio Oil Co.'s No. 15 G. W. Taylor Acct. 1, 100 ft. S and W, C SE Sec. 15-23-8. Set 13⅜-in. csg. 980 ft.; T. James L. 4,789 ft.; cd. L., S.W. 4,789-4,811 ft.; drlg. sh.&L. 5,046 ft.

De Soto Parish

Foster & Smith's No. 1 McRae, 800 ft. S, 550 ft. W, C Sec. 5-12-16. Set 10-in. csg. 60 ft.; W.O.C.

Grant Parish

C. M. Bowers' No. 1 Goodpine Oil Co., C SE SE Sec. 13-9n-1w. T. Wlx. 1,622 ft.; S.W. sd. 1,626 ft.; S.D.; W.O.

La Salle Parish

O. K. Allen, Jr., et al's No. 1 Breedlove, C SW NE Sec. 32-11-3e. Set 10¾-in. csg. 100 ft.; T. Wlx. 1,600 ft.; T.D. 1,660 ft., S.D.; perf. 2,232-38 ft.; tstd. 13 B.F.P.H.; ¼-in. ck.; 25% S.W.; sqzd. and W.O.C.
Ark. Fuel Oil Co.'s No. 1-B Goodpine Oil Co., C NW SW Sec. 18-10n-3e. T. Wlx. 1,590 ft.; oil sd. 2,203-18 ft. and 2,221-39 ft.; set 7-in. csg. 2,335 ft.; W. O.C.
Coon & Ezell's No. 1 Herring, 300 ft. W, 150 ft. S, NE SE SW Sec. 1-8n-3e. S.D. 55 ft.
E. F. Neely's No. 1 Lisendy, 330 ft. NW cor. NE NE Sec. 19-10-3. T. Wlx. 1,600 ft.; br. sh. 2,227-41 ft.; cd. oil sd.; T.D. 2,380 ft.; set 5-in. csg. 2,368 ft.; T.D. 2,380 ft.; W.O.C.
Placid Oil Co.'s No. 4 Goodpine, C NE NW Sec. 18-20-3e. O.T.D. 2,242 ft.; set 7-in. csg. 2,435 ft.; Schlmb.: T. Wlx. 1,630 ft.; oil sds. 2,234-50 ft., 2,258-66 ft., and 2,275-91 ft.; perf. 2,258-63 ft.; swbd. oil and S.W.; sqzd.; perf. csg. 2,234-40 ft.; tstd. small amt. oil and S.W.; reperf. 2,235-40 ft. and 2,240-46 ft.; tstg.
Placid Oil Co.'s No. 5 Goodpine, C SE NW Sec. 18-10-3. Set 10¾-in. csg. 99 ft.; cd. oil sd. 2,232-42 ft.; set 7-in. csg. 2,428 ft.; perf. 2,226-40 ft.; tstd. 1,100 ft. F.I.H., 50% S.W.; W.O.
Placid Oil Co.'s No. 10 La. Cent. Lbr. Co., C NW SW Sec. 7-10n-3e. Took side-wall cores 3,880 ft.; set csg. 2,650 ft.; swbd. 7 to 8 B.F.P.H.; 20% S.W.; perf. 2,206-15 ft. and 2,186-92 ft.; tstd. S.O. and S.W.; sqzd. all perf. and reperf. 2,224-28 ft. and flwd. 300 B.F., 50% S.W.; open tbg.; closed in; W.O.
Placid Oil Co.'s No. 16 La. Central, C NW NW Sec. 36-10-2. Set 10¾-in. csg. 105 ft.; T. Wlx. 1,562 ft.; oil sd. 2,180-2,204 ft. and 2,312-46 ft.; T.D. 2,419 ft.
Placid Oil Co.'s No. 17 La. Central, C NW SE Sec. 19-11-3e. R.U.

Fred Stovall, Tr.'s No. 1 Russell, 200 ft. NW cor. SE SE Sec. 25-10-1e. Set 10-in. csg. 60 ft.; W.O.C.
G. W. Ziegen's No. 17 La. Central, C NW NE Sec. 36-11-2e. Set 10-in. csg. 100 ft.

Madison Parish

H. L. Hunt's No. 1 Ayers Tmbr. Co., C NW SW Sec. 18-15-10. M.I.M.

Morehouse Parish

Southern Carbon Co.'s No. 30 Tensas, Sec. 2-21-4e. Set 12½-in. csg. 154 ft.; 8-in. csg. 730 ft.; W.O.C.

Red River Parish

J. E. Parham's No. 1 Haynes, 2,192 ft. N, 1,000 ft. E, SW cor. Sec. 20-13-9e. 10-in. csg. 135 ft.; set 6-in. csg. 1,000 ft.; T.D. 1,428 ft.; acd. with 1,500 gal.; tstg.

Sabine Parish

Geo. L. Pace's No. 5 Logan Oil Co., 330 ft. SW cor. SW NW Sec. 26-10-13. Set 7-in. csg. 1,925 ft.; T.D. 1,940 ft.; W. O.C.
Roy Raines' No. 1 Carter, NW NW Sec. 27-9-11. T.D. 1,820 ft.; S.D.
Sam Sklar's No. 1 First Natl. Bnk., 330 ft. SW cor. NW SW Sec. 29-8-12. Set 10-in. csg. 63 ft.; set 6-in. csg. 2,171 ft.; tstd. dry; S.O. 2,546 ft.; acd. with 3,000 gal. and tstd. dry; drlg. clk. 2,639 ft.
Sutton Zwolle Oil Co.'s No. 3 Sabine, 1,650 ft. S, 660 ft. E, NW cor. NE Sec. 23-7-14. S.G. 3,538-60 ft.; jnkd. hole 3,560 ft.; W.O.

Tensas Parish

H. L. Hunt's No. 1 Chicago Mill & Lbr. Co., C NW NW Sec. 30-13-10. Set 10¾-in. csg. 266 ft.; drlg. sh. 3,204 ft.

Union Parish

Interstate Nat. Gas Co.'s No. 97 fee, Sec. 2-21-3. Set 8-in. csg. 790 ft.; set 6-in. csg. 2,129 ft.; W.O.C.
Memphis Nat. Gas Co.'s No. 2 Potts, Sec. 19-21-3e. R.U.
Nemours Corp.'s No. 1 Hollis, Sec. 10-21-3. Set 6-in. csg. 1,986 ft.; W.O.C.

Webster Parish

Hunt Oil Co.'s No. 2 Scott, 1,980 ft. N, 50 ft. E, SW cor. Sec. 20-21-9. Set 13⅜-in. csg. 610 ft.; drlg. sh. 675 ft.
Hunt Oil Co.'s No. 6 E. L. Stewart, 200 ft. NW C NE SE Sec. 30-21-10. Set 9⅝-in. csg. 5,606 ft.; drlg. sh.&L. 6,364 ft.
Midstates Oil Corp.'s No. 1 Giddens unit, 282 ft. N and W, C SW NE Sec. 30-21-9. R.U.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co.'s No. 1 Boudoin, Sec. 64-12s-3e. 13⅜-in. csg. 1,776 ft.; 6-in. csg. 11,100 ft.; T.D. 11,345 ft.; abd.

Anse La Butte—St. Martin Parish

Glassell & Glassell's No. 2-A Breaux, Sec. 117-9s-5e. T.D. 4,576 ft.; 7-in. csg. 4,576 ft.; perf. csg. 4,551-76 ft.; I.P. 129 B.P.D.; 10/64-in. ck.
Glassell & Glassell's No. 1 Tortoris, Sec. 122-9s-5e. R.U.
Glassell & Glassell's No. 1 Patin, Sec. 121-9s-5e. T.D. 4,759 ft.; 6-in. csg. 4,745 ft.; I.P. 275 B.P.D.; 10/64-in. ck.
Stanolind O. & G. Co.'s No. 1 Bergeron, Sec. 121-9s-5e. R.U.
Stanolind O. & G. Co.'s No. 1 L. D. Bergeron, Sec. 88-9s-5e. T.D. 4,889 ft.; 7-in. csg. 4,850 ft.; perf. csg. 4,682-4,702 ft.; I.P. 152 bbl. in 7 hrs.; ½-in. ck.

Bancroft—Beauregard Parish

Republic Prod. Co.'s No. 18 Columbia, Sec. 15-6s-13w. Loc.
Republic Prod. Co.'s No. 11 Lutcher Moore, Sec. 11-6s-13w. T.D. 7,525 ft.; perf. csg. 7,480-90 ft.; tstg.

Barataria—Jefferson Parish

California Oil Co.'s No. 1 La. Truck & Orange Co., Sec. 15-15s-23e. 10¾-in. csg. 2,011 ft.; S.D. 3,285 ft.
California Oil Co.'s No. 1 Danciger-State, Sec. 2-16s-23e. Loc.
Carter, Perrin & Brian's No. 1 Penniman-Westerfeldt, Sec. 15-15s-23e. R.U.
Carter, Perrin & Brian's No. 2 Rutley-Wiseman, Sec. 2-16s-23e. R.U.
Geo. Conover's No. 1 Conover Community, Sec. 22-15s-23e. Loc.
Fohs Oil Co.'s No. 1 Conselman, Sec. 22-15s-23e. Loc.

Baton Rouge—East Baton Rouge Parish

Wm. Helis' No. 6-A L.S.U., Sec. 67-7s-1w. T.D. 6,493 ft.; 7-in. csg. 6,484 ft.
Wm. Helis' No. 9 Nelson, Sec. 36-7s-1w. Loc.
Sugarfield Oil Co.'s No. 3 Community, Sec. 45-7s-1e. 10¾-in. csg. 1,315 ft.; T. D. 6,814 ft.; 7-in. csg. 6,800 ft.; I.P. 216 B.P.D.; 10/64-in. ck.
Sugarfield Oil Co.'s No. 2 Reinken, Sec. 46-7s-1e. Drlg. sh. 2,420 ft.

Bayou Blue—Iberville Parish

T. G. Markley and Crosby Drlg. Co.'s Sec. 74-9s-10e. Drlg. sh. 2,246 ft.
Superior Oil Co.'s No. 1 E. B. Schwing, Sec. 73-9s-10e. T.D. 8,362 ft.; P.B.: sdtrkd.; drlg. sd.&sh. 2,354 ft.
Superior Oil Co.'s No. 3 Schwing Lbr. Co., Sec. 74-9s-10e. Loc.

Bayou Choctaw—Iberville Parish

Standard Oil Co. of La.'s No. 2 Cypress Sec. 28-8s-11e. 10¾-in. csg. 2,250 ft.; T.D. 8,609 ft.; P.B.; sdtrkd.; drlg. sh. &L. 6,094 ft.

Bayou des Glaise—Iberville Parish
Humble O. & R. Co.'s No. 3-B Wilberts & Sons, Sec. 78-8s-8e. R.U.

Bayou Pigeon—Iberia Parish
Plymouth Oil Co.'s No. 1 Leblanc, Sec. 13-12s-10e. Dredge canal.

Bayou des Allemands—La Fourche Parish
Amerada Pet. Corp.'s No. 4 Gheens Realty, Sec. 56-15s-20e. Drlg. sh. 5,669 ft.

Delta Farms—La Fourche Parish
Tide Water Asso. Oil Co.'s No. 2 Delta Farms, Inc., Sec. 1-17s-22e. Dredge can.

Bay St. Elaine—Terrebonne Parish
Jefferson Lake Sulphur Co.'s No. 1 Salt Dome Royalties, Sec. 8-22s-18e. R.U.

Caillou Island—Terrebonne Parish
Texas Co.'s No. 13 State, Sec. 20-23s-20e. Drlg. sh. 5,006 ft.
Texas Co.'s No. 68 State, Sec. 17-23s-20e. T.D. 6,745 ft.; P.B. to sdtrk.

Cameron Meadows—Cameron Parish
Magnolia Pet. Co.'s No. 28 Cameron Meadows, Sec. 21-14s-13w. Rec. 4,000 ft. oil; D.S.T. 5,585-5,610 ft.; T.D. 6,-252 ft.; prep. to test.

Chacahoula—La Fourche Parish
Sun Oil Co.'s No. 2 Cypress, Sec. 75-15s-15e. 13⅜-in. csg. 1,815 ft.; drlg. sh. 6,129 ft.
Sun Oil Co.'s No. 8 Dibert, Stark & Brown Cypress Co., Sec. 70-15s-15e. 10¾-in. csg. 1,831 ft.; T.D. 5,806 ft.; fsg.

Chalkley Field—Cameron Parish
Humble O. & R. Co.'s No. 9 Hanzen, Sec. 9-12s-6w. Drlg. sh. 8,805 ft.
Shell Oil Co., Inc.'s No. 1 Coastal Club. T.D. 10,184 ft.; make D.S.T.

Cheneyville—Rapides Parish
Amerada Pet. Corp.'s No. 10 Weil, Sec. 53-1s-2e. Drlg. 2,420 ft.
S. W. Richardson's No. 13 Weil, Sec. 55-1s-2e. Drlg. sh. 6,712 ft.

Darrow—Ascension Parish
Humble O. & R. Co.'s No. 3-B Community, Sec. 30-10s-2e. T.D. 9,335 ft.; fsg.
Kiva Oil Co.'s No. 1 Duplessis, Sec. 6 10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish
Texas Co.'s No. 11 State, Sec. 32-21s-16e. 10¾-in. csg. 1,751 ft.; T.D. 6,997 ft.; P.B.; sdtrkd.; drlg. salt 6,870 ft.
Texas Co.'s No. 24 State, Sec. 5-22s-16e. Loc.

Edgerly—Calcasieu Parish
Emerson Oil Corp.'s No. 3 Stanolind fee Sec. 28-9s-11w. Sdtrkd.; T.D. 3,680 ft.; 5½-in. csg. 3,665 ft.; trying to sdtrk.

Eola—Avoyelles Parish
Amerada Pet. Corp.'s No. 4 Sam Cerami Sec. 6-2s-3e. T.D. 8,573 ft.; tstg.
Amerada Pet. Corp.'s No. 4 Irion, Sec. 7-2s-3e. Cg. sh. 8,536 ft.
Amerada Pet. Corp.'s No. 1 Martin, Sec. 1-2s-2e. Drlg. sh. 7,669 ft.
Amerada Pet. Corp.'s No. 1 Turbe, Sec. 45-1s-2e. Drlg. sh. 8,329 ft.
Harry Bass et al's No. 2 Richie. Drlg. sh. 8,015 ft.
Gulf Oil Corp.'s No. 3 Mouliere, Sec. 1-2s-2e. T.D. 8,555 ft.; 5½-in. csg. 8,554 ft.; I.P. 748 B.P.D.; ¼-in. ck.
Lester A. Lemoine's No. 1 fee, Sec. 41-1s-3e. Loc.
Geo. Lilly's No. 2 Dent, Sec. 1-2s-2e. Drlg. sd.&sh. 2,630 ft.
S. W. Richardson's No. 12 Haas Inv Co., Sec. 8-2s-3e. T.D. 8,575 ft.; 5½-in. csg. 8,574 ft.; I.P. 758 B.P.D.; ¼-in. ck.
S. W. Richardson's No. 1-B Haas Inv. Co., Sec. 42-1s-2e. Drlg. sh. 8,370 ft.

Erath—Vermilion Parish
Strake Pet. Co., Inc.'s No. 1 V. L. Caldwell, Sec. 41-13s-4e. Drlg. 10,020 ft.
Texas Co.'s No. 1 Trahan, Sec. 22-13s-4e. R.U.

Fausse Point—Iberia Parish
Sun Oil Co.'s No. 2 Cling & Walet, Sec. 26-11s-8e. Drk.
Sun Oil Co.'s No. 2 Planters Lbr. Co., Sec. 27-11s-8e. 10¾-in. csg. 1,436 ft. drlg. sd. 5,511 ft.
Texas Co.'s No. 7 State, Sec. 35-11s-8e. T. salt 7,001 ft.; T.D. 7,005 ft.; P.B.; sdtrkd.; drlg. sdy. sh. 5,890 ft.

Garden Island—Plaquemines Parish
Texas Co.'s No. 45 State, Sec. 38-23s-33e. Drlg. sd., sh.&L. 3,412 ft.

Gillis—Calcasieu Parish
Union Sulphur Co.'s No. 9 Kaufman, Sec 7-9s-7w. T.D. 7,149 ft.; P.B.; sdtrkd.; drlg. sh. 7,420 ft.
Union Sulphur Co.'s No. 3 McIver, Sec. 14-9s-8w. Loc.

Golden Meadow—La Fourche Parish
Bennett O. & R. Co.'s No. 2 Authement. Sec. 12-19s-22e. Drlg. sh. 6,240 ft.
Bennett O. & R. Co.'s No. 1 Guilbeau, Sec. 2-19s-22e. Drlg. sh. 5,110 ft.
Berkshire Oil Co.'s No. 1 Nicol, Sec. 9 19s-22e. 10¾-in. csg. 2,362 ft.; T.D. 10,078 ft.; 7-in. csg. 8,207 ft.
Brown & Woods' No. 1 Guilbeau. Sec 2-19s-22e. T.D. 2,673 ft.; 5½-in. csg. 2,636 ft.; flwg. 24 B.F.
Temple Hargrove's No. 5 Gaspard, Sec. 9-19s-22e. T.D. 5,540 ft.; 5½-in. csg. 5,490 ft.
Jim McMurray Prod. Co.'s No. 1 Orgeron, Sec. 12-19s-22e. S.D. 4,600 ft.
M. H. Marr et al's No. 2 B. & D. unit, Sec. 17-19s-22e. Road comp.
M. H. Marr et al's No. 3 B.&D. unit, Sec. 12-19s-22e. 10¾-in. csg. 2,580 ft.; drlg. sh. 5,750 ft.
Martex Oil Corp.'s No. 5 Falgout Holding Co., Sec. 9-19s-22e. T.D. 5,451 ft.; 5½-in. csg. 5,150 ft.
Martex Oil Corp.'s No. 3 Rebstock, Sec. 2-19s-22e. T.D. 2,674 ft.; 5½-in. csg. 2,660 ft.
Martex Oil Corp.'s No. 1 Yankee Canal, Sec. 22-19s-22e. Loc.
Geo. O'Dwyer's No. 3 La Fourche Realty Co., Sec. 21-19s-22e. T.D. 5,500 ft.
S. Rhodes' No. 1 Nickerson, Sec. 12-9s-8w. Drlg. sh. 5,520 ft.
C. R. Schuster's No. 1 Broussard, Sec. 2-19s-22e. T.D. 2,648 ft.; 5-in. csg. 2,637 ft.; tstg.
Terouche Oil Co.'s No. 2 Cheramie, Sec. 12-19s-22e. Drk.
Texas Co.'s No. 13 Falgout Holding Co., Sec. 9-19s-22e. Drlg. sd.&sh. 4,446 ft.
Texas Co.'s No. 12 Golden Meadow, Sec. 78-19s-21e. T.D. 9,250 ft.; sdtrkd.; drlg. sh. 4,948 ft.
Texas Co.'s No. 6 La Terre, Sec. 1-20s-21e. 10¾-in. csg. 2,050 ft.; T.D. 10,680 ft.; run csg.
Texas Co.'s No. 7 La Terre, Sec. 1-20s-21e. 7-in. csg. 2,638 ft.; T.D. 2,674 ft.; I.P. 113 B.P.D.; 5/32-in. ck.

Grand Bay—Plaquemines Parish
Gulf Ref. Co.'s No. 2-A Grand Prairie Lv. dist., Sec. 48-20s-18e. T.D. 9,721 ft.; P.B. 9,715 ft.
Gulf Oil Co.'s No. 7-A Grand Prairie Lv. dist., Sec. 5-20s-19e. Drlg. sh. 4,-926 ft.
Gulf Oil Co.'s No. 8-A Grand Prairie Dist., Sec. 5-20s-19e. Loc.
Gulf Oil Co.'s No. 9-A Grand Prairie Lv. dist., Sec. 31-19s-19e. Loc.
Gulf Oil Co.'s No. 5 State QQ, Sec. 31-19s-19e. Loc.
Texas Co.'s No. 3 State-Lookout Pass, Sec. 6-20s-19e. Drlg. sd.&sh. 10,068 ft.

Grand Lake—Cameron Parish
Amerada Pet. Corp.'s No. 10 State, Twp. 13s-4w. T.D. 9,000 ft.; perf. csg. 8,945-55 ft.; I.P. 234 B.P.D.; 5/32-in. ck.
Superior Oil Co.'s No. 10 State, Sec. 5-16s-4w. Drlg. sdy. sh. 8,585 ft.

Hackberry—Cameron Parish
Hanson & Abercrombie's No. 2 Verdin, Sec. 36-12s-10w. Drlg. sh. 7,359 ft.
Stanolind O. & G. Co.'s No. 22 Cameron Parish, Sec. 16-12s-10w. Drlg. sh.&L. 7,900 ft.
Stanolind O. & G. Co.'s No. 31 Gulf Ld., Sec. 25-12s-11w. Drlg. sh.&L. 7,557 ft.
Superior Oil Co.'s No. 10 Vincent, Sec. 30-12s-10w. T.D. 8,301 ft.; perf. csg. 7,-706-7,800 ft.; I.P. 424 B.P.D.; 12/64-in. ck.

Happytown—Iberville Parish
Shell Oil Co., Inc.'s No. 1 Schwing Lbr & Shingle Co., Sec. 85-7s-8e. Cg. sh. 10,700 ft.

Jeanerette—St. Mary Parish
Cajun Oil Co.'s No. 1 Roanes Sugar Co., Sec. 58-13s-8e. Drk.
Herton Oil Co.'s No. 10 Banta, Sec. 40-13s-9e. 10¾-in. csg. 2,950 ft.; cg. sd. 10,212 ft.

Jefferson Island—Iberia Parish
Texas Co.'s No. 5 Jefferson Island, Sec. 58-12s-5e. 10¾-in. csg. 2,209 ft.; drlg. sdy. sh. 6,623 ft.
Texas Co.'s No. 6, Jefferson Island, Sec. 59-12s-5e. Drk.
Texas Co.'s No. 3 State, Twp. 12s-5e. T.D. 7,576 ft.; 7⅝-in. csg. 7,573 ft.

Jennings—Acadia Parish
Port City Oil Co.'s No. 26 Haywood, Sec. 41-9s-2w. T.A. 3,005 ft.; 7-in. csg. 1,-826 ft.; perf. csg. 1,730-55 ft.; I.P. 50 bbl., 2% S.W.; pmpg.
Shell Oil Co., Inc.'s No. 11 Community, Sec. 40. 10¾-in. csg. 1,721 ft.; T.D. 8,-135 ft.; fsg.
Stanolind O. & G. Co.'s No. 118 Crowley, Sec. 48-9s-2w. Drk.
Stanolind O. & G. Co.'s No. 20 Houssiere-Latreille, Sec. 47-9s-2w. Drlg. sd.&sh. 3,412 ft.

Kenilworth—St. Bernard Parish
Vendome Pet. Corp.'s No. 3 Kenilworth, Sec. 76-14s-14e. R.U.

Lafitte—Jefferson Parish
Texas Co.'s No. 15 Lafitte, Sec. 20-17s-24e. T.D. 10,135 ft.; 7-in. csg. 10,123 ft.; 5-in. csg. 10,040 ft.; perf. csg. 9,-953-70 ft.; I.P. 320 B.P.D.; ¼-in. ck.
Texas Co.'s No. 16 L.L.&E., Lafitte, Sec. 17-17s-24e. Drlg. sh.&L. 10,155 ft.
Texas Co.'s No. 6 Marrero, Sec. 21-17s-24e. 10¾-in. csg. 1,861 ft.; drlg. sd.& sh. 2,405 ft.

La Fourche Crossing—La Fourche Parish
Lisbon-Iberia Oil Co.'s No. 1 Joe Bergeron, Sec. 16-15s-17e. M.I.M.
Lisbon-Iberia Oil Co.'s No. 1 Prosper Thibodaux, Sec. 17-15s-17e. Drlg. by fish; drlg. sh. 9,367 ft.
Mikton Oil Co.'s No. 3 Martinez, Sec. 13-15s-17e. Drlg. sh. 126 ft.

Lake Mongoulois—St. Martin Parish
Texas Co.'s No. 8 State, Sec. 10-10s-9e. Drlg. sdy. L. 10,315 ft.

Lake Pelto—Terrebonne Parish
Texas Co.'s No. 31 State, Sec. 8-23s-18e. T.D. 5,666 ft.; P.B.; sdtrkd.; drlg. sd.& sh. 4,621 ft.

Lake Salvador—Plaquemines Parish
California Co.'s No. 1 Delta Minerals, Lse. 5, Sec. 2-15s-24e. R.U.

Leeville—La Fourche Parish
Texas Co.'s No. 73 Leeville, Sec. 27-21s-22e. T.D. 8,319 ft.

Neale—Beauregard Parish
Atlantic Ref. Co.'s No. 1 Musser-Davis Lbr. Co., Sec. 26-3s-11w. Drlg. sh. 2,-626 ft.
Atlantic Ref. Co.'s No. 1 Spiers, Sec. 26-3s-11w. Drlg. sh. 8,176 ft.

New Iberia—Iberia Parish
Acadian Prod. Co.'s No. 4 E. T. Weeks. Sec. 51-12s-7e. Loc.
Wm. Helis' No. 10 Schwing, Sec. 56-12s-7e. T. salt 8,952 ft.; T.D. 8,960 ft.; 6-in. csg. 8,883 ft.; perf. csg. 8,706-16 ft.; tstd. dry gas.
Wm. Helis' No. 1 Boliver, Sec. 56-12s-7e. T.D. 1,026 ft.; 7-in. csg. 998 ft.; I.P. 83 B.P.D.; ⅛-in. ck.
Texas Co.'s No. 2 Bryant, Sec. 25-12s-7e. R.U.
Texas Co.'s No. 7 Bryant, Sec. 25-12s-7e R.U.
Texas Co.'s No. 16 Duke, Sec. 26-12s-7e. Drlg. sh. 3,003 ft.
Texas Co.'s No. 17 Duke, Sec. 26-12s-7e. T.D. 6,066 ft.; 7-in. csg. 6,016 ft.; I.P. 240 B.P.D.; 10/64-in. ck.

North Crowley—Acadia Parish
Humble O. & R. Co.'s No. 1 Quebodeaux, Sec. 45-8s-1e. Drlg. sd. 8,072 ft.
Humble O. & R. Co.'s No. 5 Stakes, Sec. 33-8s-1e. T.D. 8,955 ft.; perf. csg. 8,-110-13 ft.; swb. S.W.
Humble O. & R. Co.'s No. 6 Stakes, Sec. 33-8s-1e. Drk.

North Elton—Calcasieu Parish
W. T. Burton's No. 1 Calcasieu Natl. Bnk., Sec. 23-6s-3w. Drlg. sh. 7,220 ft.
W. T. Burton's No. 1 Pine Farms, Sec. 24-6s-3w. Loc.

Paradis—St. Charles Parish
Humble O. & R. Co.'s No. 1 Matthews & Olivera, Sec. 4-14s-20e. Loc.
Texas Co.'s No. 4 L.L.&E. Paradis, Sec. 6-14s-20e. 10¾-in. csg. 2,607 ft.; T.D. 10,680 ft.; 7-in. csg. 10,680 ft.; tstg.
Texas Co.'s No. 1 Sunset Realty & Planting Co., Sec. 38-14s-20e. 10¾-in. csg. 2,716 ft.; drlg. sh. 9,550 ft.

Plumb Bob—St. Martin Parish
Texas Co.'s No. 13 St. Martin Ld. Co. Sec. 21-8s-7e. T.D. 8,464 ft.; 7-in. csg. 8,464 ft.; perf. csg. 8,256-70 ft.; tstg.
Texas Co.'s No. 14 St. Martin, Sec. 21-8s-7e. Driving piling.

Port Barre—St. Landry Parish
Gulf Ref. Co.'s No. 16 Wilson Cochran, Sec. 4-6s-5e. Drlg. sd. 5,910 ft.
McDannald Oil Co.'s No. 1 Sibille, Sec. 7-6s-6e. T.D. 6,074 ft.; P.B.; sdtrkd.; T.D. 5,438 ft.; fsg.
Sorrento Synd.'s No. 2 L. L. Barnard. 7-6s-6e. Loc.
Texas Co.'s No. 28 Botney Bay, Sec. 4-6s-5e. Cg. sd. 6,127 ft.

Potash—Plaquemines Parish
Humble O. & R. Co.'s No. 44 Orleans Lv. Bd., Sec. 13-18s-15e. 16-in. csg. 284 ft.; drlg. sd. 1,808 ft.

Quarantine Bay—Plaquemines Parish
Gulf Oil Corp.'s No. 6-A Orleans Lv. Bd., Sec. 7-19s-17e. Drlg. sdy. sh. 9,720 ft.
Gulf Ref. Co.'s No. 17 State, Twp. 19s-17e. T.D. 8,576 ft.; 9⅝-in. csg. 8,431 ft.; drlg. sh. 9,215 ft.
Gulf Ref. Co.'s No. 18 State, Twp. 19s-17e. Loc.

Sorrento—Ascension Parish
Pan American Prod. Co.'s No. 18 United Ld. Co., Sec. 15-10s-4e. Drlg. sh. 517 ft.
Pan American Prod. Co.'s No. 19 United Ld. Co., Sec. 15-10s-4e. Loc.
Sorrento Synd.'s No. 2 L. L. Bernard Sec. 22-10s-4e. R.U.

South Jennings—Jeff Davis Parish
W. H. Collins' No. 1 Richard, Sec. 22-10s-3w. Drk.
Stanolind O. & G. Co.'s No. 1 W. H Adams, Sec. 14-10s-3w. T.D. 9,606 ft.; perf. csg. 9,537-57 ft.; tstg.
Stanolind O. & G. Co.'s No. 1 E. K. Atwell, Sec. 14-10s-3w. Drlg. sh. 7,537 ft.
Stanolind O. & G. Co.'s No. 1 L. Renage, Sec. 9-10s-3w. T.D. 10,953 ft.; abd.
Stanolind O. & G. Co.'s No. 1 Hebert Sec. 21-10s-3w. Drlg. sh.&shells 7,546 ft.

South Roanoke—Jeff Davis Parish
Continental Oil Co.'s No. 2 Fay, Sec. 31-10s-3w. Drlg. sh. 9,433 ft.

Starks—Calcasieu Parish
W. T. Burton & McLean's No. 2 Industrial Lbr. Co., Sec. 29-9s-12w. T.D. 5,-849 ft.; T. sd. 5,833 ft.; tstg.
W. T. Burton Oil Co.'s No. 1 Lutcher Moore Lbr. Co., Sec. 30-9s-12w. T.D. 4,810 ft.; 5½-in. csg. 3,990 ft.; S.D.

Sweet Lake—Cameron Parish
Pure Oil Co.'s No. 17 Stanolind O. & G. Co., Sec. 12-13s-8w. 9⅝-in. csg. 1,431 ft.; drlg. sd. 6,376 ft.

Timbalier Bay-La Fourche
Gulf Ref. Co.'s No. 6 State, Sec. 36-23s-21e. Loc.

Valentine—La Fourche Parish
T. G. Markley et al's No. 2 Dousson, Sec. 100-17s-20e. Drlg. sh. 6,557 ft.

Venice—Plaquemines Parish
Tide Water Asso. Oil Co.'s No. 8 Buras Lv. dist., Sec. 22-21s-30e. Loc.
Tide Water Asso. Oil Co.'s No. 1 C. L. Johnson, Sec. 35-21s-30e. T.D. 8,303 ft.; 7-in. csg. 8,305 ft.; perf. csg. 7,990-8,050 ft.; I.P. 200 B.P.D.; ⅛-in. ck.
Tide Water Asso. Oil Co.'s No. 12 Manhattan Ld. Co., Sec. 35-21s-30e. Loc.

Vermilion Bay—Iberia Parish
Texas Co.'s No. 4-B Vermilion Bay, Twp. 16s-15e. 11¾-in. csg. 4,454 ft.; T. salt 5,855 ft.; T.D. 7,546 ft.; 8⅝-in. csg. 7,546 ft.

Ville Platte—Evangeline Parish
Amerada Pet. Corp.'s No. 1 J. Foret, Sec. 1-4s-2e. Drlg. sh.&L. 9,760 ft.
Continental Oil Co.'s No. 3 Fontenot, Sec. 47-3s-2e. T.D. 9,368 ft.; fsg.
Continental Oil Co.'s No. 7 Fontenot, Sec. 3-4s-2e. Drlg. sh. 7,820 ft.
Continental Oil Co.'s No. 5 Hass, Sec. 44-3s-2e. Drlg. 8,030 ft.
Continental Oil Co.'s No. 5 Hirsch, Sec. 44-3s-2e. Drlg. sh. 10,170 ft.
Contineintal Oil Co.'s No. 4 Tate, Sec. 1-4s-2e. Drlg. sh.&L. 9,320 ft.
Continental Oil Co.'s No. 1 J. E. Vidrine, Sec. 47-3s-2e. T.D. 9,113 ft.
Continental Oil Co.'s No. 2 Vidrine, Sec. 1-4s-2e. Drlg. sh. 7,620 ft.
Danciger O. & R. Co.'s No. 3 Vidrine, Sec. 1-4s-2e. R.U.
J. K. Hughes' No. 2 Ortego, Sec. 36-3s-2e. T.D. 10,230 ft.; 6-in. csg. 10,230 ft.; perf. csg. 10,136-56 ft.; I.P. 396 B.P. D.; ⅛-in. ck.

West Cote Blanche—St. Mary Parish
Texas Co.'s No. 2 State, West Cote Blanche, Twp. 16s-6e. Drlg. sh.&L. 7,-196 ft.
Texas Co.'s No. 3 State, West Cote Blanche, Twp. 16s-6e. Loc.

West Gueydan—Vermilion Parish
Magnolia Pet. Co.'s No. 1 Benoit, Sec. 5-12s-2w. 10¾-in. csg. 1,900 ft.; drlg. sh. 4,526 ft.

White Castle—Iberville Parish
Jolly Pet. Corp.'s No. 1 E. B. Adams, Sec. 1-11s-12e. T.D. 9,002 ft.; 7-in. csg. 9,001 ft.; P.B. 8,896 ft.; perf. csg. 8,-926-32 ft.; I.P. 240 B.P.D.; ⅛-in. ck.
Shell Oil Co., Inc.'s No. 2 Forest Home. T.D. 1,404 ft.; W.O.C.
Shell Oil Co., Inc.'s No. 16 Wilbert, Sec. 8-11s-12e. T.D. 6,465 ft.; P.B. 6,385 ft. I.P. 356 B.P.D.; 11/64-in. ck.

Woodlawn—Jeff Davis Parish
Union Sulphur Co.'s No. 3 Johnson, Sec. 12-9s-6w. R.U.
Union Sulphur Co.'s No. 1 T. Miller, Sec. 6-9s-5w. Drlg. sdy. sh. 8,371 ft.

S. LOUISIANA WILDCATS

Acadia Parish
Humble O. & R. Co.'s No. 1 F. E. Atkinson, Sec. 26-10s-1e. Drlg. sh. 8,682 ft.

Assumption Parish
Shell Oil Co., Inc.'s No. 1 A. L. Patereau, Unit 1, Sec. 66-16s-14e. Drlg. sh. 9,-687 ft.

Beauregard Parish
Danciger O. & R. Co.'s No. 1 G. E. Le-Roy, Sec. 2-3s-9e. R.U.
Loffland Bros.' No. 3 Long Bell Lbr. Co., Sec. 24-5s-11w. T.D. 10,224 ft.; abd.

Calcasieu Parish
M. H. Hannah's No. 1 Reed, Sec. 18-10s-12w. R.U.

Cameron Parish
Phillips Pet. Co.'s No. 1 Miami Corp., Sec. 11-4s-6w. Well tried to blow out; stk. D.S.; sdtrkd. 3,775 ft.; 9⅝-in. csg. 9,583 ft.; T.D. 10,511 ft.; rmg
Superior Oil Co.'s No. 3 State, Sec. 1-14s-9w. Drlg. sh. 4,390 ft.

East Baton Rouge Parish
Farris & Golding Drlg. Co.'s No. 1 Paulet, Sec. 58-8s-1e. 10¾-in. csg. 1,780 ft. S.D. 6,828 ft.

Iberia Parish
H. J. De Arman's No. 1 Burleigh, Sec. 21-13s-7e. S.D. 3,031 ft.; abd.

Iberville Parish
Falcon-Seaboard's No. 1 Folse, Sec. 11s-13e. R.U.
Shell Oil Co., Inc.'s No. 1 Southwood, Sec. 20-9s-2e. T.D. 10,307 ft.; abd.

Jeff Davis Parish
H. M. Naylor's No. 1 Acadia Dev. Co., Sec. 12-10s-2w. 10¾-in. csg. 2,115 ft.; 9⅝-in. csg. 9,006 ft.; T.D. 10,000 ft.; 7-in. csg. 10,000 ft.; perf. csg. 9,703-20 ft.; flwd. gas and S.W.; killed; reperf. csg. 9,250-60 ft.; rec. S.W.
Union Sulphur Co.'s No. 1 Eba Miller, Sec. 6-9s-5w. Loc.

Jefferson Parish
Shell Oil Co., Inc.'s No. 1 State, Sec. 27-20s-24e. Driving piling.
Vendome Pet. Co.'s No. 1 Coulon, Sec. 15-15s-23e. Drlg. sh. 9,702 ft.

La Fourche Parish
Ernest Cockrell's No. 1 La Fourche Ld. Co., Sec. 32-18s-22e. 10¾-in. csg. 650 ft.; T.D. 2,988 ft.; T.A.
Gulf Oil Corp.'s No. 1-B Bowie Lbr. Co., Sec. 69-15s-19e. Drlg. sh. 12,500 ft.
Humble O. & R. Co.'s No. 1 Caldwell Sugars, Inc., Sec. 115-14s-15e. 13⅜-in. csg. 2,988 ft.; 9⅝-in. csg. 10,921 ft.; drlg. sh. 12,116 ft.

Orleans Parish
W. T. Burton Co.'s No. 3 State-Lake St. Catherine, Twp. 11s-14e. Loc.

Plaquemines Parish
Gulf Oil Corp.'s No. 1-E Buras Lv. dist.,

Sec. 1-23s-10e. T.D. 9,287 ft.; 9⅝-in. csg. 9,269 ft.; drlg. plg.
California Co.'s No. 1 Delta Minerals, Sec. 2-15s-24e, 13⅜-in. csg. 2,028 ft.; T.D. 10,240 ft.; 7-in. csg. 10,188 ft.; perf. csg. 9,960-65 ft.; flwd. oil and wtr.; no ga.

Rapides Parish

Gulf States' No. 1 Long Bell Lbr. Co., Sec. 46-4n-3w. R.U.
R. L. Wheelock et al's No. 1 H. V. Rushing, Sec. 1-2n-1e. Drlg. sh. 5,936 ft.

St. Charles Parish

Celestine Oil Co.'s No. 1 Celestine plantation, Sec. 17-11s-4e. Drlg. sh. 750 ft.
R. H. Parker et al's No. 1 C. L. Thompson, Sec. 87-13s-20e, 10¾-in. csg. 2,599 ft.; T.D. 11,200 ft.; abd.
Texas Co.'s No. 1 State-Lake Salvador, Twp. 16s-22e. Loc.

St. James Parish

Arcadian Prod. Co.'s No. 1 Celstine Plant, Sec. 74-11s-4e. T.D. 1,244 ft.

St. Landry Parish

S. A. Thompson's No. 1 Wm. Murphy, Sec. 22-5s-6e. 10¾-in. csg. 1,209 ft.; drlg. sh. 7,375 ft.

St. Mary Parish

Sun Oil Co.'s No. 1 Belle Isle, Sec. 6-18s-11e. Drlg. sh. 5,720 ft.

Terrebonne Parish

Barnsdall Oil Co.'s No. 1 Nelson, Sec. 2-21s-11e. 10¾-in. csg. 2,767 ft.; 8⅝-in. csg. 10,505 ft.; T.D. 11,731 ft.; D.S.S.; P.B. 8,500 ft.; perf. csg. 7,417-27 ft.; rec. drlg. mud, no oil; prep. to retest.
Stanolind O. & G. Co.'s No. 1 State (Bay Junop), Sec. 35-21s-14e. R.U.
Texas Co.'s No. 5 State, Coon Point, Twp. 23s-14e. Loc.

Vermilion Parish

I. Delcambre's No. 1 Renard, Sec. 17-13s-5e. Drlg. sh. 800 ft.
Union Oil Co. of Calif.'s No. 1 Walter White hrs., Sec. 17-15s-1e. 13⅜-in. csg. 2,800 ft.; T.D. 10,395 ft.; P.B. to sdtrk.

TEXAS

Week Ended June 1

GULF COAST FIELDS

Anchor—Brazoria County

Humble O. & R. Co.'s No. 2 Mettler. Drlg. sh. 10,299 ft.
Sun Oil Co.'s No. 1 Morris Stern, Shubal Marsh Sur. 18⅝-in. csg. 128 ft.; drlg. sd.&sh. 10,907 ft.

Old Ocean—Brazoria County

Harrison & Abercrombie's No. 8 Bernard, C. Breen Sur. Drlg. sh.&L. 7,330 ft.
Harrison & Abercrombie's No. 1 Chenault, C. Breen Sur. T.D. 10,600 ft.; tstg.
Harrison & Abercrombie's No. 1 Mueller et al, M. M. Nuckols Sur. Drlg. sd.& sh. 8,786 ft.
Harrison & Abercrombie's No. 1 A. F. Wilson, D. McCormick Sur. Drlg. sd.& sh. 10,415 ft.
Stanolind O. & G. Co.'s No. 2 Giles, C. Breen Sur. Drlg. sdy. sh. 10,536 ft.
Stanolind O. & G. Co.'s No. 1 Stevenson-Donovan, Inla Keep Sur. 9⅝-in. csg. 7,039 ft.; drlg. sdy. sh. 10,276 ft.
Sun Oil Co.'s No. 4 Borsodi, C. Breen Sur. 13⅜-in. csg. 1,520 ft.; 9⅝-in. csg. 7,009 ft.; drlg. sh. 10,917 ft.
Sun Oil Co.'s No. 5 McCampbell, C. Breen Sur. Drlg. 10,169 ft.

South Cotton Lake—Chambers County

Humble O. & R. Co.'s No. 1 E. E. Barrow, S. Barrow Sur. Drlg. sh. 8,135 ft.

Willow Slough—Chambers County

Sun Oil Co.'s No. 3 R. J. Barrow, A. Ybarbo Sur. Drlg. sh. 6,091 ft.

Caplen—Galveston County

Sun Oil Co.'s No. 5 Zinn & Forman, S. F. Hughes Sur. Drlg. sh.&L. 7,314 ft.

League City—Galveston County

Phillips Pet. Co.'s No. 1 Parr, Perry & Austin Sur., Lot 9. Drlg. sh. 8,936 ft.
Phillips Pet. Co.'s No. 4 Stewart Title Guaranty Co., S. F. Austin Sur. 10¾-in. csg. 3,520 ft.; 7⅝-in. csg. 9,510 ft.; T.D. 11,270 ft.; well blew out; killed; P.B.; sdtrkd.; drlg. sh. 10,687 ft.

Aldine—Harris County

Titanic Oil Co.'s No. 1 Weary, Lots 21 and 20, E. Farias Sur. Loc.

Clear Lake—Harris County

Humble O. & R. Co.'s No. 44-C fee, G. B. McKinstry Sur. Cg. sd. 5,874 ft.
Humble O. & R. Co.'s No. 8 Hutchinson, Wm. Dobie Sur. T.D. 5,838 ft.; fsg.

Friendswood—Harris County

Humble O. & R. Co.'s No. 34 Beamer, T. Choate Sur. T.D. 6,034 ft.; W.O.C.

Fannett—Jefferson County

Gulf Oil Corp.'s No. 5 Bordages, J. Probarth Sur. Drlg. sdy. sh. 5,570 ft.

La Belle—Jefferson County

Sun Oil Co.'s No. 1 Foltz, Sur. 376, 9⅝-in. csg. 7,600 ft.; drlg. sh. 8,580 ft.

South China—Jefferson County

Titanic Oil Co.'s No. 3-A Broussard, S. Miles Sur. Loc.

Esperson—Liberty County

General Crude Oil Co.'s No. 20 Davis, A. McNeil Sur. 8⅝-in. csg. 7,181 ft.; T.D. 9,734 ft.; P.B. 7,600 ft.
General Crude Oil Co.'s No. 12-B Esperson, A. McNeil Sur. Loc.
General Crude Oil Co. and R. A. Welch's No. 1 fee, M. Duncan Sur. T.D. 7,505 ft.; abd.

Martha—Liberty County

Stanolind O. & G. Co.'s No. 1 Garrow, I.&G.N.R.R. Sur. 7. T.D. 9,825 ft.; 5½-in. csg. 9,208 ft.; rec. gas-cut mud and S.W.; perf. csg. 8,594-8,600 ft.; reperf. csg. 8,057-64 ft.; tstg.

Wilson Creek—Matagorda County

Barnsdall Oil Co.'s No. 1 Stoddard, G. B. M. Cotton Sur. 9⅝-in. csg. 7,895 ft.; well tried to blow out 10,298 ft.; stk. D.S.

Ace—Polk County

Shell Oil Co., Inc.'s No. 2 Kirby West Lbr. Co., P. A. Sublett Sur. Drlg. 7,370 ft.

Segno—Polk County

Gordon Oil Co.'s No. 10-A Wing, I.&G. N. Sur. 15. T.D. 6,325 ft.; P.B. 3,400 ft.
Gulf Oil Corp.'s No. 4 Quinn, A. Morales Sur. R.U.
Gulf Oil Corp.'s No. 33 Wing, I.&G.N. Sur. 15. T.D. 8,176 ft.; 5½-in. csg. 8,146 ft.; tstg.
Gulf Oil Corp.'s No. 35 Wing, I.&G.N. Sur. 13. Drlg. sh. 3,814 ft.
Gulf Oil Corp.'s No. 37 Wing, I.&G.N. Sur. 15. R.U.
Humble O. & R. Co.'s No. 23-BX Kirby Lbr. Co., M. Victor Sur. 9⅝-in. csg. 2,940 ft.; drlg. sh. 7,836 ft.

Joe's Lake—Tyler County

Republic Prod. Co.'s No. 36 fee, N. Hurd Sur. Drlg. sh. 7,673 ft.
Republic Prod. Co.'s No. 37 fee, N. Hurd Sur. Drlg. sh. 4,534 ft.
Dick Schwab et al's No. 1 Nona Fletcher Lbr. Co., E. Thompson Sur. Drlg. sh.&L. 5,811 ft.

Hilje—Wharton County

Texas Co.'s No. 2 Peters, E.T.R.R. Sur., Sec. 101. Loc.

GULF COAST WILDCATS

Brazoria County

Glenn McCarthy's No. 1 W. B. Munson, Samuel Carter Sur. Drlg. sh. 10,750 ft.
Rowan & Nichols Oil Co.'s No. 1 Hubbard, Wm. Harris Sur. 10-min. D.S.T. 9,107-34 ft.; rec. 128 ft. mud and dist.; drlg. sh. 9,389 ft.

Chambers County

Humble O. & R. Co.'s No. 1 State, Sec. 247, Galveston Bay. Drlg. sh.&L. 6,650 ft.
Humble O. & R. Co.'s No. 1 State, Sec. 288, Galveston Bay. Loc.
Sun Oil Co.'s No. 1 Clara C. Smith, T.& N.O. Sur. 82. T.D. 8,549 ft.; sdtrkd.; T.D. 8,320 ft.; D.S.S.; P.B.; sdtrkd.; T.D. 8,098 ft.; rmg.
Standard Oil Co. of Texas' No. 61-54 State. T.D. 9,538 ft.; 7-in. csg. 9,129 ft.; perf. csg. 8,563-66 ft.; rec. S.W.; S.D.

Colorado County

Cockburn Oil Corp.'s No. 1 R. W. Ferrs, H. Chrisman Sur. Loc.
Shell Oil Co., Inc.'s No. 1 R. H. Goodrich, H. Heller Sur. Drlg. sh. 1,260 ft.
Shell Oil Co., Inc.'s No. 1 Plow Realty Co., Obediah K. Winn Sur. T.D. 8,339 ft.; 7-in. csg. 8,337 ft.; perf. csg. 8,135-43 ft.; I.P. 237 bbl., 35-gr. oil per day; ⅛-in. ck.

Fort Bend County

H. C. Cockburn's No. 1 G. W. Burkett, Bundieck Sur. Loc.
Superior Oil Corp.'s No. 2 A. P. George, A. B. Keller Sur. 10¾-in. csg. 1,816 ft.

Galveston County

Stanolind O. & G. Co.'s No. 1 J. A. Hulen, A. Brigham Sur. 13⅜-in. csg. 2,470 ft.; T.D. 9,166 ft.; flwg. 341 bbl. net oil plus 34% S.W. per hr. through two flow lines.

Harris County

Christian-Carpenter Drlg. Co.'s No. 1 Anderson, J. C. Anderson Sur. 10¾-in. csg. 819 ft.; cg. 6,236 ft.
Gulf Oil Corp.'s No. 1 H. H. Roberts, A. Roberts Sur. T.D. 7,583 ft., S.D.
Wm. Hobson's No. 1 N. N. Allen, Blk. 12, Geo. Green Sur. 10¾-in. csg. 725 ft.
Joyce Richardson's No. 1 Marks, J. C. Ogburn Sur. Tstd. 450 lb. W.P.; rec. 360 ft. gas-cut mud; D.S.T. 6,586-6,624 ft.; T.D. 6,811 ft.
G. F. Steger's No. 1 Trahan, E. Ruhl Sur. Loc.

Jackson County

Barnsdall Oil Co.'s No. 1 Lozarus, S. F. Austin Sur. T.D. 5,932½ ft.; perf. csg. 5,924-29 ft.; flwd. 48 bbl. in 9 hrs.; ⅛-in. ck.; gas-oil ratio high; killed.
John Mayo and Kirkpatrick Drlg. Co.'s No. 1 J. H. Tucker, R. Musquez Sur. R.U.

Jasper County

Houston Oil Co. et al's No. 1 Medrano fee, Jose Medrano Sur. 10¾-in. csg. 1,896 ft.; drlg. sh. 6,279 ft.

Jefferson County

Merrimac Oil Corp.'s No. 1 State, Tr. 72, 50 ft. due E of Harwell's abd. hole W.O.; R.U.

Liberty County

Hebert & Smith's No. 1 W. E. Boyt, H. &T.C.R.R. Sur. 7-in. csg. 8,700 ft.; T.D. 9,312 ft.; perf. lnr. 8,955-75 ft.; tstg.

Matagorda County

Stanolind O. & G. Co.'s No. 1 General American Life Ins., J. C. Peyton Sur. 9⅝-in. csg. 8,001 ft.; T.D. 10,810 ft.; W.O.C.
Texas Gulf Prod. Co.'s No. 1 Gulf Tex. Oil Co., Ira Ingram Sur. Drk.
Texas Co.'s No. 1 A. B. Pierce, H.&G. N. Sur., Sec. 1, Blk. 65. 7-min. D.S.T. 7,914-31 ft.; rec. 200 ft. dist.; tstd. 300 lb. W.P.; drlg. sh. 8,175 ft.
Texas Co.'s No. 2 R. V. Taylor, F. George Sur. Drlg. sh. 1,450 ft.

Montgomery County

H. C. Cockburn et al's No. 1 Bender Montgomery Co. Sch. Ld. and De Crow Sur. Loc.
Continental Oil Co.'s No. 1 Bender est. Montgomery Co. Sch. Ld. Sur. 13⅜ in. csg. 1,243 ft.; T.D. 11,213 ft.; 9⅝-in. csg. 7,200 ft.; prep. to sdtrk.
David B. MacDaniel's No. 1 Hattie O Baldwin, Walker Co. Sch. Ld. Sur 10¾-in. csg. 1,230 ft.; T.D. 9,741 ft.; 5½-in. csg. on bttm.; perf. csg. est. 9,300-9,400 ft.; reperf. csg. 9,392-9,425 ft.; swbg.

San Jacinto County

Harrison & Abercrombie's No. 1 W. S. Dixon, Solomon Cole Sur. Drlg. sh. 8,296 ft.
Shell Oil Co., Inc.'s No. 1 Coldine, J. Rankin Sur. Rec. 9 B.O. and 9 bbl. S.W.; D.S.T. 7,815-7,790 ft.; drlg. 8,403 ft.

Walker County

E. J. Dupree's No. 1 Texas Long Leaf Lbr. Co., M. Milsap Sur. T.D. 3,113 ft.

Washington County

J. A. Deering's No. 1 C. W. Bohne, S. Gates Sur. S.D. 6,545 ft.
Mount Selman Oil Co.'s No. 1 Fritz Fuelberg, W. Lightfoot Sur. S.D. 5,962 ft.
Standard Oil Co. of Kansas' No. 1 Kamas, S. M. Williams Sur. 10¾-in. csg. 583 ft.; drlg. 2,630 ft.

Wharton County

Eura B. Oil Co.'s No. 1 Hamburger, W. C.R.R. Sur. 65. Loc.
Sam Harrison's No. 1 Carlson, Morris & Cummins Sur., Sec. 3. O.W.D.D.; T.D. 6,510 ft.; perf. csg. 5,806-09 ft.; well went dead; R.U. to pmp.
Magnolia Pet. Co.'s No. 2 A. P. Borden. E. M. Coy Sur. M.I.M.
Titanic Oil Co.'s No. 1 Kountze, Morris & Cummings Sur., Sec. 3. Drlg. sh. 3,702 ft.

S. W. TEXAS WILDCATS

Aransas County

Continental Oil Co.'s No. 2 St. Charles Co., R. D. Blassman Sur.; (relief well to blow out). Drlg. sh. 8,216 ft.

Atascosa County

H. M. Hill et al's No. 1 Campbell, Chas. Mason Sur. 128. Drk.
Walter Pope's No. 1 Counties, A.B&M. Sur. 1013. S.D. 715 ft.

Bastrop County

Ashby & Williams' No. 1 C. Y. Powell, J. G. Welchmeyer Sur. Drlg. ck. 2,352 ft.
August Bering's No. 1 Rivers, B. Osborne Sur. Drlg. 1,412 ft.
C. R. Franklin's No. 1 Oscar McDonald, Martha Baker Sur. T.D. 2,232 ft.; 5½-in. csg. 1,500 ft.
W. C. McGlothlin et al's No. 1 Bill, Albert Black Sur. Cg. L. 3,122 ft.
Ogden & Riddle's No. 6 Riddle, J. B Bialock Sur. T.D. 2,244 ft., clk.; 5½-in. csg. 2,005 ft.; swbg.; N.S.

Bee County

Mills Bennett Prod. Co. and Anderson-Prichard Oil Corp.'s No. 2 Robinson, J. M. Uranga Sur. (Wlx. test, West Tuleta field). 13-in. csg. 2,537 ft.; 9⅝ in. csg. 7,804 ft.; T.D. 9,210 ft.; perf. csg. 7,545-50 ft.; tstd. 6¼ bbl. dist. per hr., ¼-in. ck. on tbg.; T.P. 2,600 lb.; C.P. 2,250 lb.; S.I.; W.O.
Sultex Oil Co.'s No. 1 Wood, Jas. McGeehan Sur. T.D. 6,162 ft.; 7-in. csg. on bttm.; drlg. sh. 6,176 ft.

Bell County

J. J. Cormas' No. 1 Jeff Ellis, Elizabeth Berry Sur. S.D. 493 ft.

Bexar County

C. G. Bigby's No. 1 Mauermann, Fernando Rodriguez Sur. T.D. 649 ft.
Joe Noake's No. 1 San Antonio Sub Irrg. Farm, W. Miller Sur. 190. T.D 780 ft.
Roger Putnam's No. 1 Conaway, John H. Lucas Sur. 54. S.D. 495 ft.
Jos. Turner et al's No. 1 John Brown, T. H. Hobbs Sur. 357. Drlg. 2,706 ft.

Brooks County

West Prod. Co.'s No. 1 J. D. Cage, G.C.& S.F. Sur. 31. Loc.

Burleson County

H. Y. Barnett's No. 1 Fick, J. S. Cox Sur. Drlg. gbo. 1,547 ft.

Caldwell County

Kean & Williamson's No. 1 E. E. Rector, J. Roberts Sur. T.D. 1,897 ft.; run csg.

Calhoun County

Coronado Corp.'s No. 1 K. Welder, Hidalgo Sur., 3 mi. SE Seadrift. "Tight well"; reported to be tstg.; 5½-in. csg. 9,750 ft.; perf. csg. 9,500-9,000-9,700 ft.; rec. S.W.; made sqze. job at 8,580 ft.; S.D.
Eura B. Oil Co.'s No. 1 T. P. Traylor, Sec. 3, I.&G.N. Sur. T.D. 7,506 ft.; abd.
Ray Ranger et al's No. 1 W. R. Sells, Sam Houston Sur. R.U.

Cameron County

Sal Vieja Oil Co. et al's No. 1 Garcia, Santa Isabel gr. 8⅝-in. csg. 8,322 ft.; drlg. sh. 10,307 ft.

Duval County

Bridwell Oil Co.'s No. 1-A Rogers, J. Poltevent Sur., Sec. 21. Rec. 210 ft. oil; 10-min. D.S.T. 4,321-27 ft.; T.D. 4,327 ft.; 5½-in. csg. 4,321 ft.
W. L. Catlin et al's No. 1 Louis Escapule, J. Poltevent Sur. 73. R.U.
Gorman & Yoakam et al's No. 1, D.C.R. C.G.C.&S.F.R.R. Sur. 193. R.U.
Magnolia Pet. Co.'s No. 1 Sinclair hrs., F. C. and C. K. Gravis Sur. 510. Loc.
Mayfair Oil Corp.'s No. 2 Yates, J. Poltevent Sur. 323. Drlg. 50 ft.
Sun Oil Co.'s No. 1 Garcia, A.B.&M. Sur., Sec. 407. T.D. 5,087 ft.; 5½-in. csg. 4,959 ft.; perf. csg. 4,900-10 ft.; pmpg.; no ga.

Gillespie County

E. L. Nixon's No. 1 Mayford, Pedro Cobrera Sur. 29. Drlg. sh. 675 ft.

Goliad County

J. K. Culton's No. 1 S. E. Cole, Goliad Town Tr. Loc.

Gonzales County

M. T. Huebner's No. 1 M. P. Smith, R. Plummer Sur. T.D. 1,135 ft.

Guadalupe County

Wellington Oil Co.'s No. 1 Mouermann, Jose de la Bauma Sur. Drlg. 3,315 ft.

Gulf State Oil Co.'s No. 2 Cardinas, San Salvador del Tule gr. 16-in. csg. 157 ft. T.D. 8,700 ft.; perf. csg. 7,732-52 ft.; flwg. gas and dist.

Jim Hogg County

Achning-Daubert's No. 1 Wood, Sabas de la Garza Sur. 82. Loc.
French Oil Corp.'s No. 3 Pena, G. W. Rose Sur. 574. Loc.
Humble O. & R. Co.'s No. 3 Mestena O. & G. Co., San Antonio de Baluarte gr., Sec. 392. Drlg. sh. 5,936 ft.

Jim Wells County

H. H. Howell's No. 1 San Antonio Joint Stock Ld. Bnk., Lopez gr., Sec. 9, Blk. 14. Drlg. sdy. sh. 5,910 ft.
H. H. Howell and Tesemelis' No. 1 D. C. Daniels, M. Berrera gr. Loc.
M. M. Miller & Son's No. 1 T. M. Gallagher, Casa Blanca gr. T.D. 5,200 ft.; make D.S.T.

Karnes County

Jack Frazier's No. 1 Cochran, Daniel B. McConnell Sur. R.U.

Kendall County

C. M. Dewey's No. 2 Seidensticker, R. Davis Sur. 20. S.D. 950 ft.

Kimble County

Austin Bridge Co.'s No. 1 Wilkinson, Brooks & Burleson Sur. Drlg. 834 ft.
J. C. Renfro's No 1. D. C. Morales, Hrs. of H. Grote Sur. 423. T.D. 1,495 ft.; U.R.
Schwab-Carlyle & Auld's No. 1 Baker, F. C. Stisser Sur. T.D. 1,490 ft.; rec.; fsg.

Kleberg County

Skelly Oil Co.'s No. 1 State, Laguna de Los Olmos gr., Tr. 385. 7⅝-in. csg. 7,669 ft.; drlg. sh. 8,753 ft.

La Salle County

H. R. Cullen's No. 1 A. L. Washburn, L. W. Earnest Sur. 88. Rec. 150 ft. gas-cut mud; S.O.; D.S.T. 4,740-4,805 ft.; drlg. 5,160 ft.

Lee County

Fred Pederson et al's No. 1 Brown, David Hudson Sur. T. Glen Rose L. 6,600 ft.; T.D. 8,202 ft.; 5½-in. lnr. cmtd. 8,201 ft.

Live Oak County

Sinclair Prairie Oil Co.'s No. 1 Hamilton, Hooper & Wade Sur. 119. 10¾-in. csg. 510 ft.; S.D. 4,514 ft.
Smith & Storey's No. 1 Lyne, A.C.H.& B. Sur. 163. T.D. 3,350 ft.; abd.
L. W. Stieren's No. 3 Lange, Thos. Adams Sur. T.D. 1,497 ft.

McMullen County

W. F. Ashby's No. 1 Enlaw, D. M. Stapp Sur. 27. S.D. 1,037 ft.
H. F. Baker's No. 1 Galloway, G. R. Galloway Sur. 34. Loc.
Jake Jarmon's No. 1 Hayter, B.S.&F. Sur. 105. Loc.

McCormick-King Prod. Co.'s No. 1 Shiner, Jose Alderete Sur. 14. R.U.
Tybro Royalty Co.'s No. 4 Martin, H. L. Williams Sur. T.D. 715 ft.

Medina County

W. D. Bacon's No. 1 Wurzbach, Juan Delgado Sur. 37½. T.D. 420 ft.; 8¼-in. csg. 420 ft.
G. R. and L. J. Dorsey's No. 1 Robertson, John George Sur. S.D. 425 ft.
Great Southern Exp. Co.'s No. 1 A. Muennick Sur. 5. S.D. 744 ft.

Nueces County

Humble O. & R. Co.'s No. 1 State, Nueces Bay, Tr. 723. M.I.R.
John Manley et al's No. 1 Ruegg, Geo. H. Pauls subd. of Driscoll ranch. Loc.
Pure Oil Co.'s No. 1 S. Little, S. Ward Sur. 194. 13¾-in. csg. 179 ft.; drlg. sh. 6,217 ft.
Southern Minerals Corp.'s No. 1 Community, Paso Ancho de Abajo gr. Drlg. sh. 6,090 ft.
Stanolind O. & G. Co.'s No. 1 State, C. M. Blucher Sur., Tr. 746, 1¼ mi. S of E. White Point field. Loc.
Texas Conservative Oil Co.'s No. 1 Isensee, Gregorio Farias Sur. Drk.

Refugio County

C. L. Norsworthy's No. 1 T. C. Holeman, M. Reilly Sur. T.D. 6,509 ft.; W. O.

Starr County

A. L. Bone et al's No. 3 Garcia, Juan Salinas Por. 71. Drlg. sh. 300 ft.
Geo. Boyle et al's No. 1 Carruth, Santiago Lopez Porc. 92. Rec. 900 ft. P.L. O.; D.S.T. 3,482-97 ft.; T.D. 3,504 ft.; 5½-in. csg. on bttm.
Glen Harroun's No. 1 Green & Manning, Juan J. Garza Falcon Porc. 81. T.D. 2,644 ft.; 5½-in. csg. 2,621 ft.
Lynes & Robertson's No. 1 Villareal, C. C.S.D.&G.N.R.R. Sur. 241. Loc.
Magnolia Pet. Co.'s No. 3 Guerra, Santa Cruz gr. (La Reforma field). Drlg. sh. 5,786 ft.
Sun Oil Co.'s No. 1 Claude King, C.C.S. D.&R.G.N.G.R.R. Sur. 511. Loc.
Sun Oil Co.'s No. 1 W. G. Lehr, C.C.S.D. R.G.N.G.R.R. Sur. T.D. 5,542 ft.; 5½-in. csg. 4,468 ft.; perf. csg. 4,127-37 ft.; swbd. S.W.; S.S.O.
Syndicate Oil Corp.'s No. 1 Sanchez, Santos Sanchez Sur. 344. T.D. 1,004 ft.

Travis County

J. H. Sprouls and A. G. Hinn's No. 1 A. D. Balm, Santiago de Valle gr. T.D. 1,273 ft.
Ralph R. Tanner's No. 1 Felix Cherico, Santiago del Valle Sur. S.D. 660 ft.

Val Verde County

Joiner Oil Co. et al's No. 1 Clyde Sellers. T.D. 1,848 ft.; S.D.

Victoria County

British American Oil Co.'s No. 1 J. J. Warden, E. McDonough Sur. 10¾-in. csg. 505 ft.; cg. 5,212 ft.
Colton & Colton's No. 1-D Edwin Fimbel, T.&N.O. Sur. 3. Drlg. sh. 3,200 ft.
Colton & Colton's No. 1 Terrell, J. B. Sideck Sur, T.D. 5,285 ft.; 7-in. csg. 5,284 ft.; flwg. 5 B.P.H.; ¼-in. ck.; T. P. 500 lb.
Colton & Colton's No. 1 Wray, C. L. Thurmond Sur. R.U.
Maryland Oil Co.'s No. 1 A. Kolle, C. Sambrano Sur. Cg. sd. 3,146 ft.
S. W. Richardson's No. 1 Keeran, M. DeLeon Sur. R.U.
S. J. Ryan's No. 1 Bankers Mortgage Co., A. Esparza Sur., Lot 1, Blk. 2. 10¾-in. csg. 601 ft.; S.D. 6,003 ft.
Geo. Smith's No. 1 Reiman, M. Zepeda Sur. Drlg. sh. 2,280 ft.
C. S. Sollars' No. 1 Knolle, Casiano Sambrano Sur. Drlg. sh. 1,620 ft.
Texas Gulf Prod. Co.'s No. 1 Kester, C. M. Creanor Sur. T.D. 6,881 ft.; perf. csg. 5,883-85 ft.; reperf. 5,103-05 ft.; flwg. dry gas; tstg.
Texas Gulf Prod. Co.'s No. 1 Wiseheart, F. Perez Sur. Loc.

Webb County

Cash & Reynolds' No. 2 C. M. Frost, C. C.S.D.&R.G.N.G. Sur. 17. T.D. 2,263 ft.; abd.
Glenda Oil Co.'s No. 1 Salvado ranch, Sec. 657, J. V. Borrego gr. Cd. sd. 1,001-08 ft.; 5½-in. csg. 1,001 ft.
H. E. Hall's No. 1 Slator, Mission Oil Co., J. V. Borrego gr. Drlg. sh. 730 ft.
Locke Purnell's No. 2 Kirkpatrick, C.S. D.&R.G.N.G.R.R. Sur. 57. S.D. 1,805 ft.
M. L. Massingill's No. 2 Kirkpatrick, C. C.S.D.&R.G.N.G. Sur. 59. Loc.
Tide Water Asso. Oil Co.'s No. 8 Bruni, M. Arispe gr.; (deep test, Bruni field). R.U.

Williamson County

Jas. Criswell's No. 1 R. Z. Baker, Theophilis W. Metcalf Sur. S.D. 500 ft.
C. C. Lanier's No. 1 Guental, Harry Cooke Sur. Drlg. 1,530 ft.
C. D. Lane's No. 1 Krieg, H.T.&B. Sur. 3. Drlg. L. 1,410 ft.
Richardson & Lefors' No. 1 Kutzschbach, P. J. Mahan Sur. 115. T.D. 850 ft.; abd.

Wilson County

W. D. Moore et al's No. 1 Lorenz, Morris May Sur. S.D. 75 ft.

Zapata County

Jack Giblin et al's No. 1 Haynes, Villa gr. Loc.
Hawkeye Pet. Co.'s No. 1 Uribe, J. V. Borrego Sur. Drlg. sh. 1,500 ft.
H. F. Wilcox O. & G. Co.'s No. 6 Gilliam, Pedro Mesa Sur. 12. T.D. 3,921 ft.; run csg.

Zavala County

W. H. Holland et al's No. 1 Cuellar, J. M. Cuellar Sur. 248. S.D. 1,650 ft.
H. F. Wilcox O. & G. Co.'s No. 1 Voigt, Jas. Crabtree Sur. 30. R.U.

E. C. TEXAS WILDCATS

Anderson County

Phillips Drlg. Co.'s No. 1 Susie Hanks, W. C. Collingsworth Sur., 13 mi. W of Franks. Drlg. 3,500 ft.

Angelina County

Arkansas Fuel Oil Co.'s No. 1 Carter-Kelly, T.&N.O. Sur. 4. Cg. 1,960 ft.
K. L. McHenry's No. 1 Redditt-Fairchilds, 2,700 ft. S and 1,200 ft. E lines of T.&N.O. Sur., 10 mi. SE of Copestown. Drlg. 2,803 ft.
Summerall-Harris' No. 2 G. E. Condra, D. W. Maroney Sur., ½ mi. W of Huntington. S.D.O. 615 ft.

Camp County

W. C. McGlothlin's No. 1 Venters, S. Wright Sur., 3 mi. SE Leesburg. R.U. to D.D. to Pett. zone; prep. set csg. to test show in Pett. L. 7,943-90 ft.; had 47 ft. of sat. and por.; S.D. for title trouble at 8,087 ft.; well has not been opened.

Cherokee County

C. C. Lanier's No. 1 W. O. Reagan, W. T. Smith Sur., 2¼ mi. E of Mixon. Drk.
R. D. Salisbury's No. 1 W. M. Shankle, J. A. Manchaca Sur., 1⅛ mi. NE Chanton. P.B. 1,103 ft.; S.D.; W.O.

Fannin County

C. Newburn's No. 1 A. G. Allen, M. Caldwell Sur., 7 mi. NE of Banham. R.U. and S.D.
Mrs. A. B. Powell's No. 1 Maude Barker, T. Harrison Sur., 9 mi. N of Bonham, SE cor. 42-ac. tr. S.D. 65 ft.

Freestone County

C. F. W. Young's No. 1 Ray Simmons, M. DeCantona Sur., 1½ mi. W of Simmsboro. S.D.O. 3,500 ft.

Gregg County

Roger Lacy's No. 1 Lacy, S. P. Ford Sur., 3 mi. SW of Longview; deep Trinity gas test. Last week's report a mistake; well made 4,800,000 cu. ft. of gas on 24-hr. test.

Henderson County

Manning & Pickens' No. 1 T. H. Bell, D. Muckleroy Sur., 6 mi. SW of Mabank. S.D. for 10-in. csg. 100 ft.

Houston County

G. L. Dixon's No. 1 B. R. Crowson, J. Cheairs Sur., 5 mi. NW of Lovelady. Loc.
Elmer Hay, Tr.'s No. 1 Starr Pope, J. Forbes Sur., 2 mi. S of Lovelady, NW cor. 162-ac. tr. Drlg. 824 ft.

Kaufman County

W. H. McGee's No. 1 Rutland Savings Bnk., John Baker Sur., 2¼ mi. NE of Tulosa. T.D. 3,114 ft.
T. G. Shaw, Tr.'s No. 1 Angus Wynne, B. S. Newman Sur., 8 mi. E. Kaufman. lower Trinity test. T. anhy. 5,934 ft.; drlg. 6,275 ft.; T. Massive 6,123 ft.; B. Massive 6,255 ft.

Leon County

Alexander & Wilhite's No. 1 C. H. Mills, M. Copeland Sur., 2½ mi. E of Normangee. S.D. 10 ft.
Hall Sur., 10 mi. SE of Nacogdoches. Swbg. fresh wtr.; S.S.O. 2,329 ft.

Limestone County

Taylor, Lytle & Phillips' No. 1 J. W. Reid, P. Varela Sur., in Mexia field; deep Trinity test, located 150 ft. NW line, 714 ft. NE line of 117-ac. tr. Loc.

Nacogdoches County

Melrose Oil Co.'s No. 1 C. N. Wilson, J.

Navarro County

W. H. Warren's No. 1 L. Grey, E. Powers Sur., 9 mi. SE of Kerens. S.D. 660 ft.; T.D.

Robertson County

Rhett Wilder's No. 1 Moise Cerf., J. Erwin Sur., 7 mi. S of Franklin. S.D.O. 1,611 ft.

Rusk County

J. Z. Werby's No. 1 L. G. McMillain, W. F. Allison Sur., 6 mi. SE of New Salem. W.O.C. 356 ft.
A. O. Whittington's No. 1 Kangerga Bros., ign. Castro Sur., 9½ mi. N and slightly E of Pirtle. S.D.O. 2,846 ft.

Smith County

Carmerson Corp.'s No. 1 T. Simpson, R. Walter Sur., 3 mi. NE of Winona, SE cor. of 1,234-ac. tr. Cg. 5,124 ft.

Van Zandt County

Graddy's No. 1 Dr. C. Brandon, W. C. Scott Sur., 5 mi. NE of Edgewood. Bldg. drk.
E. L. Shackelford's No. 1 E. J. Combs, J. Wright Sur., 3½ mi. NW of Grand Saline. S.D. 54 ft.

EAST TEXAS

(Border Counties)

Cass County

Joe Griffin's No. 1 W. H. Daniel, 715 ft. EL, 360 ft. SL, 101-ac. tr., W. Pittman Sur. Drlg. 2,540 ft.
K. E. Jennings' No. 1 H. T. Wood, Sec. 23-18-28. Set surf. csg.; W.O.C.

Harrison County

Ark. La. Gas Co.'s No. 1-C Abney, Jas. Shandoin Sur. M.I.M.
Fohs Oil Co.'s No. 1 M. J. Hall, 66-ac. tr. O. H. P. Bodine Sur. Set surf. csg. 300 ft.; drlg. 3,324 ft.

Marion County—Other

John Coats' No. 2 Ida Burr, 2,740 ft. S, 330 ft. W, NE cor. J. G. Reeves Sur. R.U.
Jules Constantine's No. 1 S. Hart, 435 ft. N, 330 ft. E, SW cor. 25-ac. tr., G. Coore Sur. M.I.M.
B. I. Daniels' No. 1 T. O. Livingston, G. Coore Sur. T.D. 2,330 ft.; W.O. csg.
T. B. Donnell's No. 1 E. W. Easterling, 330 ft. S, 1,200 ft. W, NE cor. 200-ac. tr., M. G. Nail Sur. T.D. 2,341 ft.; set 5½-in. csg. 2,234 ft.; pmpg. S.W. 2,-341 ft.
J. M. Horne's No. 1 W. F. Singleton, 1,-331 ft. EL, 50 ft. NL, J. O. Jackson Sur. Set 5½-in. csg. 2,267 ft., T.D.
H. T. Manning's No. 1 T. O. Livingston, G. Coore Sur. M.I.M.
J. D. Reynolds' No. 5-B Terry est., W. Coore Sur. T.D. 2,350 ft.; set 5½-in. csg. 2,316 ft.; W.O.S.R.
Roosth & Genecov's No. 1 T. O. Livingston, 300 ft. SW cor. 8-ac. tr., G. Coore Sur. R.U.
Sentinel Oil Co.'s No. 1 W. Taylor, 700 ft. N, 325 ft. W, SE cor. B.B.B.&C. R.R. Sur. Set 10-in. csg. 45 ft.; set 5¼-in. csg. 2,229 ft.; tstd. dry 2,347 ft.; drlg. 2,477 ft.

Marion County—Rodessa

Holcomb & Thomason's No. 1-A Madine, 400 ft. WL, 467 ft. NL, 33.6-ac. tr., A. D. S. Coy Sur. Set 9⅝-in. csg. 1,840 ft.; Hill sd. 5,979 ft.; Gloyd 6,092 ft.; set 6-in. csg. 6,118 ft., T.D.; perf. and acd. 6,096-6,112 ft. and tstd. est. 30,000,000 cu. ft. gas; sqzd. off perf. and drld. out to 6,118 ft.; set 100 ft. of 5-in. aluminum csg. on bttm. and will reperf. at approx. 6,106-14 ft.

Sabine County

Sterm & Womack's No. 1 I. K. Kieth Southwestern Lands, 400 ft. SL, 500 ft. EL, 53-ac. tr., L. Grace Sur. M.I. rig.

Shelby County

Earl McDaniels et al's No. 1 J. S. Swann, 470 ft. EL, 1,400 ft. SL, 100-ac. tr., Ann Gray Sur. T.D. 2,378 ft.; 9⅝-in. csg. 585 ft.; W.O.C.
P. & B. Oil Co.'s No. 2 W. C. Windham, A. K. English Sur. Set 10-in. csg. 170 ft.; drlg. L.&sh. 2,513 ft.
W. C. Parker's No. 1 F. G. Willey, 480 varas NL, 240 varas EL, 94-ac. tr., A. K. English Sur. Set 5½-in. csg. 3,330 ft.; W.O.C.

WEST CENTRAL TEXAS DISTRICT

Brown County

H. T. B. Prod. Co.'s No. 1 C. R. Smith, NW NW S½ Sec. 31, H. F. Brewster Sur. 290; 1,300-ft. test. Loc.
A. M. Stalcup's No. 1 J. C. Morris, 900 ft. S, 700 ft. E lines of Morris tr. in John Goodwin and W. B. Hester Surveys. S.D. csg. 972 ft.

Callahan County

N. D. Gallagher's No. 1 E. Grisson, SE pt. Sec. 2, Blk. 8, S.P. Sur. S.D.O. 691 ft.
E. Johnson's No. 3 M. Hughes, SE cor. NE NE Sec. 127, B.B.B.&C. Sur. S.D. O. 884 ft.
H. W. Lee's No. 1 Mrs. Murray Harris, SW cor. NW SW Sec. 99, B.B.B.&C. Sur.; 1,350-ft. test. Loc.
C. A. Redmond's No. 1 H. T. Moore, SE cor NE Sec. 9, Blk. 6, S. P. Sur.; 2,000-ft. test. P.B. 1,843 ft.; shot 1,834-43 ft.; S.D.O. 1,955 ft.
J. L. Reeves' No. 1 N. A. Estes, SW¼ Sec. 4, Blk. 8, S.P. Sur., 2½ mi. S of Bowles pool. M.I.M.

Coleman County

Anzac Oil Corp.'s No. 1 McCord, 2,200 ft. E, 2,196 ft. S of B.B.B.&C. Sur. U.R. 2,037 ft.
J. C. Ort's No. 1 Emet Walker, SE cor. Hicks Sur. W.O.C. 700 ft.
McKissick's No. 1 Morris, 330 ft. N, 1,-582 ft. W lines, Blk. 2, G.H.&H. Sur. Prep. test; Gardner sd. topped at 3,-530 ft. with sat; flwg. est. 5,000,000 cu. ft. gas and 20 B.O.P.D.; S.I. 3,566 ft.

Coryell County

Kistler O. & G. Co.'s No. 1 Barnes, 360 ft. SE line, 3,700 ft. NE line of H. Farley Sur., 3 mi. NE of Gatesville. 2,500-ft. test. S.D.O. 830 ft.

Eastland County

Burton-Womach's No. 1 J. T. Collins, NE NW Sec. 11, Blk. 1, H.&T.C. Sur.; Ellenburger lime test. M.I.M.
Dobbs Oil Corp.'s No. 1 Mrs. R. L. Poe, 1,320 ft. from S and E lines, of SE¼ Sec. 37, Blk. 3, H.&T.C. Sur. W.O. csg. 1,000 ft.
Dobbs Oil Corp.'s No. 1 Thomasson, S. H. Key Sur., 330 ft. from N, 846 ft. from E line of 80-ac. tr. T. Caddo 2,-560 ft.; S.S.O.&G. 2,570 ft.; set 7-in. 2,-570 ft.
Jones & Stasney and Groover & Rose's No. 1 McElreath, C SW Sec. 104, Blk. 3, H.&T.C. Sur.; 3,500-ft. test. Spdg.
Steele & Black's No. 1 B. B. Poe, 150 ft. N and E lines, SE¼ Sec. 6, Blk. 3, H.&T.C. Sur.; 900-ft. test. Drlg. 455 ft.

Erath County

Dillingham's No. 1 Morning. S.S.G. 3,650 ft.; S.D.O. 3,691 ft.
T. G. Jackson's No. 1 J. W. Taylor, Prater Sur., Abst. 1029, 4 mi. NE of Dedemona. Est. 15 to 20 B.O.P.D. at 3,-360-75 ft.; S.D.; may treat 3,395 ft.
E. H. Young's No. 1 J. B. Mills, J. Harry Sur., 5 mi. NW of Dublin; 3,500-ft. test. M.I.M.

Hamilton County

A. J. Caldwell's No. 1 W. W. Jones, 1,002 ft. from NE, 150 ft. from SE lines of W. H. Crowder Sur. Drlg. 2,665 ft.
Wallace & Wallace's No. 2 C. E. Lund, C S½ E 20 ac., N½ SW¼ R. J. Bailey Sur. 51. Csg. 300 ft.; S.D. csg. 3,265 ft.; T. Marble Falls 3,245 ft.; S.D.O. 3,505 ft.

Jones County

Geo. Callihan's No. 1 J. J. Steele, NE cor. SE Sec. 11, Blk. 15, T.&P. Sur. Drlg. 80 ft.
Erin Pet. Co.'s No. 1 J. M. Caton, Sec. 4, Orphan Asylum Lds. Tstg. sat. 3,360-3,404 ft.; P.B. 3,390 ft.; flwd. only sul. wtr.; shot 15 qt.; no results; S.D.O. 3,404 ft.
Fain-McGaha Oil Corp. and Ungren & Frazier's No. 1 W. G. Swenson, J. McGrew Sur. 245; 2,650-ft. test. Rng. 8¼-in. csg.; wtr. at 1,305 ft.; drlg. 1,998 ft.
J. C. Hunter's No. 1 W. Z. Betties, 2,150 ft. S, 467 ft. E lines, Sec. 1, T.C.R.R. Sur. Drld. sat. 3,458-63 ft.; csg. to tst.
J. C. Hunter's No. 1 J. Sayles, SE N½ Subd. 8, R. Smith Sur. 192, just NE of Hawley; 3,300-ft. test. Drlg. 1,778 ft.
M. R. Mead's No. 1 E. Hicks, SE cor. Sec. 5, O.A.L. Sur.; 3,500-ft. test. Mch.
Merry Bros. & Perini's No. 1 C. S. Walker, SE cor. Walker tr., G. Martinez Sur. 137. Spdg.
J. D. Sandefer, Jr.'s No. 1 Hudspeth, 160-ac. tr. in Subd. 22, Edw. Miles Sur. 219. Drlg. 1,015 ft.

Palo Pinto County

Fred Guyer's No. 1 Dalton, Dalton Sur., Abst. 153; 1,400-ft. test. Loc.
E. P. Wilson's No. 1 F. M. Watson, NW pt. of Sec. 10, Blk. 2, T.&P. Sur.; 3,-250-ft. test. S.D.O. 4,065 ft.

Parker County

Brown & Gardner Bros.' No. 1 Gilbert, T.&P. Sur., Abst. 1958. Tstg. gas; C.O. 100 ft. off bttm.; csg. set 3,905 ft.; drlg. 4,075 ft.
C. F. Carter's No. 1 E. F. Yeager, 1,000 ft. from N, 300 ft. from E lines of C. H. Atkinson Sur.; 1,000-ft. test. S.D.O. 268 ft.; H.F.W.; may comp. as wtr. well.
W. M. Holland and C. Leidecker's No. 1 G. W. Keeling, F. Lidely Sur., Abst. 829, 1¼ mi. W of Springtown; 3,500-ft. test. Drlg. 750 ft.
C. Leidecker and Wm. Holland's No. 1 J. A. Boyd, NE NE of S 100 ac. of A. J. Edwards Sur.; 4,500-ft. test. M.I.M.

Runnels County

Davis' No. 1 Summers, W½ of tr. in Day Ld. & Cattle Co. Sur., W of Beddo field. H.F. S.W.; may P.B.; S.D.O. 3,624 ft.
Homer Price's No. 1 Williams, C S½ Sec. 26, D. Diaz Sur., N outpost to Beddo field. T.D. 2,561 ft.; prep. D.D.

Shackelford County

T. L. Blanton's No. 1 W. F. Tucker, SW Sec. 552. T.E.&L. Sur. Loc.
John E. Carson's No. 1 R. A. Elliott, 660 ft. S and E lines, Sec. 48, B.A.L. Sur.; 3,650-ft. test. S.D. 1,685 ft.
Georgian Oil Corp.'s No. 1 Black ranch, C NE¼ of T.E.&L. Sur. 390, 10 mi. NE of Albany; Ordovician test, T.D. 4,825 ft.; P.B. to Caddo L. for test at 3,860-3,915 ft.; T. Ellenburger 4,730 ft.; P.B. 3,915 ft.; treated with 1,000 gal.; est. 8 to 20 B.O.P.D. at 3,915 ft.
F. N. Palm's No. 1 M. E. Daniels, SW cor. NE Sec. 16, E.T.R.R. Sur., 800-ft. test. Drlg. 455 ft.
August P. Schkade's No. 1 J. L. Godwin, NE Sec. 385, T.E.&L. Sur. Loc.
Swann & Gorsuch's No. 1 Sam Lazarus, SE SE Sec. 80, Blk. 13, T.&P. Sur. S.D.; S.S.O. 1,514-17 ft.
L. T. Terry's No. 1 W. A. Green, NW cor. S½ NE Sec. 64, Blk. 12, T.&P. Sur. S.D.O. 1,020 ft.; C.D.

Stephens County

Carey's No. 1 Crudington, SE cor. T.E. &L. Sur. 1268, 5½ mi. S of Stribling field. W.O.C. at 3,361 ft.; S.O. from 3,-362-64 ft.; acd. with 2,000 gal. 3,362-71 ft.; tstg.
Jones Bros. Drlg. Co.'s No. 1 T.X.L., 660 ft. N and E lines SE Sec. 3, Blk. 3, S.P. Sur.; 4,050-ft. test. T.D. 4,035 ft.; prep. shoot Marble Falls section.
Panhandle Ref. Co.'s No. 1 Frank Magers, SE Sec. 1, Blk. 3, S.P. Sur., 1¾ mi. N of Fagg area. S.D. 4,007 ft.
Pitzer & West and Brazos-Young Oil Corp.'s No. 1 H. Compton, SW SW Sec. 9, O.A.L. Sur., 1 mi. SE of Lovins pool; 3,600-ft. test. P.B. 3,535 ft.; acd. with 8,000 gal.; prep. to attmp. comp.
J. R. Tolbert's No. 1 W. L. Martin, NW cor. NE¼ Blk. 1335, T.E.&L. Sur., 1½ mi. SW of Fagg area. S.D. 2,300 ft.

Taylor County

Yehudi Oil Co.'s No. 1 J. Bettes, R. Ortiz Sur. 19; 2,500-ft. test. Rng. csg. 1,-860 ft.
Hose's No. 1 Bond, NE NE Sec. 40, Blind

Asylum Lds., 2 mi. SW outpost to Bowles field. S.D.O. 4,720 ft.

NORTH TEXAS WILDCATS

Archer County

L. T. Burns' No. 1 Mrs. J. Turberville, NW cor. Blk. 154, Robt. Carson Sur., Abst. 80; (Caddo lime test). Drk.

W. H. Gant's No. 1 A. Vogtsberger, Sec. 3, G. E. Co. A-146 Sur.; 5,200-ft. test. O.S. 4,659-71 ft.; L.S.O. 5,257-69 (cd.) ft.; cmtd. 6⅝-in. at 4,651 ft.; swbd. 16 B.O. in 16 hrs.; S.D.O.

Baylor County

Paul B. Scott et al's No. 1 C. H. Farr, Sec. 228, T.&N.O. Sur.; 3,100 ft. test. Drlg. 3,140 ft.

Hattie B. Madden's No. 1 J. J. James, 2,000-ft. test located 1,650 ft. from N and 150 ft. from E lines of Sec. 150, T.&N.O.R.R. Sur. S.D.O. 1,308 ft.

R. T. Myers' No. 1 W. H. Portwood, Sec. 19, H.&T.C. Sur., Blk. 45. Drlg. 330 ft.

Rogers' No. 1 Howe, J. Howe Sur., Abst. 572. S.D.O. 700 ft.

Clay County

Bridwell Oil Co.'s No. 4 Halsell, Blk. 17, W.C.R.R. Sur. Drlg. 6,030 ft.

L. T. Burns' No. 1 Tom Watson, Sec. 2631, T.E.T. Sur.; (3½ mi. SE Shell's Henderson discovery). Set 100 ft. 10-in.; drlg. 4,220 ft.

Costley's No. 1 Ed Bevering, Sec. 4, B. B.B.&C. Sur., Abst. 384. Drlg. 1,910 ft.

Walter Gant's No. 1 Edwards, S. C. Beldon Sur., Abst. 12, 4 mi. E of Henrietta. W.O.S. to C.O.

Alexander Goldsmith's No. 1 Republic Nat. Gas Co., 312 ft. N, 495 ft. W lines of Blk. 14, Parker Co. Sch. Ld. Sur., 1 mi. S of town of Petrolia; 4,500-ft. test. 6⅝-in. 2,402 ft.; perf. csg. 1,600-10 ft.; C.O.

E. C. Norwood's No. 1 K. N. Hapgood, Sec. 61, M.C.S.L. Sur.; 6,000-ft. test. Drlg. 700 ft.

W. B. Omohundro's No. 1 D. J. Percifield, Sec. 37, Belcher subd.; 5,000-ft. test. S.S.O. 5,260-72 ft.; S.D.O. 6,280 ft

Shell Oil Co., Inc.'s No. 1 Davis, Sec. 93, J. H. Belcher Sur. O.W.D.D.; L.S.O. 5,687-5,720 ft.; T.D. 6,012 ft.; perf. csg. 3,590-3,600 ft.; tstd. 600 ft. S.W. in 30 min.; sqzd. off perf.; W.O.C.

Carlos Wagner's No. 1 L. C. Thaxton, 3,630 ft. S, 330 ft. E lines of 301-ac. tr., W. C. Donley Sur., Abst. 129, Sec. 4; 5,000-ft. test. Spd. and S.D.

Cooke County

Tolbert & Rutledge's No. 1 H. W. Stark, 330 ft. from W and 466 ft. from S lines of SE¼ of D. C. Hudson Sur. Loc.

Cottle County

J. E. Burns et al's No. 1 J. E. Moss, Sec. 5, Blk. L, A. Forsythe Sur. Jnkd. 225 ft.; skd. 20 ft. S; S.D. 1,823 ft.

Denton County

Shooks & Finnell's No. 1 Sanders, Noling Sur. 5⅛-in. 1,995 ft.; drlg. plug; sat. L 2,013-45 ft.; acd. 1,000 gal.; shot 50 qt.; no results; S.D.O.

Hardeman County

Norris & Gilbert's No. 1 Robert Weekley, SW SE Sec. 87, Blk. 16, H.&T.C. Sur. S.D.R. 3,275 ft.

Jack County

R. A. Conkling's No. 1 M. Hoofle, A. James Sur., Abst. 318, 3 mi. S Antelope, 3,500-ft. test. Drk.

Noah Daves' No. 1 K. D. Baker, Sec. 2709, T.E.&L. Sur. Fsg. 3,166 ft.

Harper Pet. Co.'s No. 1 F. V. Vanhooser, J. F. Lewis Sur. Loc.

Harper Pet. Co.'s No. 1 J. W. Kinder, SW¼ Sec. 2667, T.E.&L. Sur., Abst. 762. T.D. 2,160 ft.; S.D.

H. R. Smith's No. 1 I. G. Yates, SW cor. John Holderman Sur., 6 mi. NW Jacksboro. S.D.O. 2,600 ft.

Montague County

British Am. O. P. Co.'s No. 1 J. A. Martin, Sec. 27, H.&T.C. Sur.; 6,000-ft. test. 6⅝-in. at 5,680 ft.; sat. conglomerate 5,680-95 ft.; drld. plug; washed with wtr.; well failed to kick off; S.I.

Continental Oil Co.'s No. 1 Drummond, SE cor. Sec. 8, Limestone C.S.L. Sur., 1 mi. NE of Stoneburg. Loc.

W. H. Gant and Continental's No. 1 J. L. Brown, Sec. 58, E.T.R.R. Sur. 6⅝-in. 6,843 ft.; brkn. sdy. L. S.O. 6,843 ft.; treat. 8,000 gal. acd.; test showed O.& G. 7,036-56 ft.; T.D. 7,333 ft.; rng. 5½-in. lnr. 6,843-7,333 ft.; fsg. swb. and 5,800-ft. line; set retainer 6,500 ft.; perf. 52 shots 6,000-6,400 ft.; shot 10 qt. 6,470-80 ft.; no results; shot 20 qt. 6,300-10 ft.; 1,000 ft. mud, no oil; set plug 6,080 ft.; tstg.; re-treated 6,000 gal. acid; well kicked off and flowed in derrick from lime at 6,070-6,145 ft; shut in for several days then open to flow only few bbl. by heads; tstg.

Walter Gant's No. 1 Will Laird, R. T. Millard Sur., Abst. 470, 7 mi. W of Sunset. Loc.

Harvey Drlg. Co. et al's No. 1 D. A. Threadgill, Sec. 10, Jack Co. Sch. Ld. Sur. A-390; 6,000-ft. test. Drlg. 5,401 ft.

Hults & Owens' No. 1 Tucker, NW cor. Sec. 2836, T.E.&L. Sur. Loc.

Tom F. Hunter's No. 1 Fatheree, E½ S. L. Gilliland Sur., 3 mi. S of Illinois Bend in north pt. of county. Loc.

W. H. Peckham's No. 1 Dr. Lawson, N. Kimbro Sur., Abst. 405. Drk. and M. I.M.

Sinclair Prairie Oil Co.'s No. 1 David Doty, J. H. Jones Sur., Abst. 396; (W offset to discovery). T. Ellenburger 5,820 ft.; S.O. in granite wash 5,638-62 ft.; set 6⅝-in. at 5,825 ft.; D.S.T. 5,548-83 ft. recov. 915 ft. oil-cut mud; perf. csg. 5,271-72 ft.; hole filled 800 ft. with S.W.; perf. csg. 5,436-38 ft.; flwd. 275 bbl. in 3 hrs.; tstg.

Sinclair Prairie's No. 1 T. H. Milam, Lot 54, A. Beason A-20 Sur.; 6,000 ft. test. Drlg. 5,360 ft.

Sinclair Prairie Oil Co.'s No. 1 G. Whaley, SW cor. of N½ of T. R. Jackson Sur., Abst. 394; 6,000-ft. test. Drlg. 4,450 ft.

Tarrant County

W. L. Cox's No. 1 N. H. Poole, 160 ft. from S and W lines of J. McDonald Sur. Loc.

Throckmorton County

Normandie Oil Corp.'s No. 1 Travis, Sec. 37, Travis Co. Sch. Ld. Fishing 3,127 ft.

Wichita County

Consolidated Oil Co.'s No. 1 E. M. Barnes K, Sec. 11, Blk. 7, H.&T.C. Sur. 6⅝-in. csg. at 4,336 ft.; saturation from 4,336-70 ft.; R.U.S.

Wilbarger County

Amerada Pet. Corp.'s No. 1 B. Goodpasture, Sec. 35, H.&T.C. Sur., Blk. 15. 8,000-ft. test. Sat. lime 4,407-20 ft.; 600 ft. oil and 150 ft. mud on 60-min. D.S.T.; drlg. 6,130 ft.

O. M. Stidham & Son's No. 1 C. D. Watts, Sec. 64, H.&T.C. Sur., Blk. 15.; 6,000-ft. test. S.P. and S.D.

Young County

Commodore Oil Co.'s No. 1 Clinton Realty Co., Sec. 2,384 ft, T.E.&L. Sur. Drlg. 1,745 ft.

H. W. Dyer's No. 1 M. G. Cheney, M. L. Terry Sur., Abst. 1261. S.D. 2,130 ft., reprs.

K. R. March's No. 1 Ed Burton, NE cor. Blk. 99, J. A. True Sur., Abst. 1640, 4 mi. SE Graham; 4,250-ft. test. 4,500 gal. acid 3,952-4,014 ft.; 1,800 ft. O.I.H.; testing.

A. T. Strong's No. 1 Craig heirs, N. Lynch Sur. Drlg. 2,675 ft.

Trentman Oil Co.'s No. 1 J. N. Hall, 1,840 ft. from N and 1,440 ft. from W lines of Sec. 1996, T.E.&L. Sur. Loc.

TEXAS PANHANDLE

Childress County

Texas Co.'s No. 1 P. B. Smith, NW NW Sec. 97, Blk. 9, H.&G.N. Sur., 7,500-ft. contract. Drlg. 400 ft.

Hall County

Humble Oil & Ref. Co.'s No. 1 A. D. Weaver, SW NW Sec. 51, Blk. 1, S.P. Sur.; 7,500-ft. test. Drlg. 550 ft.

Hutchinson County

Jake Phillips' No. 1 McCloy, Sec. 101, Blk. 5-T, T.&N.O. Sur. Hole filled 2,500 ft. with oil; tstg.

Ochiltree County

James R. Macon et al's No. 1 W. R. Norris, SW SE Sec. 212, Blk. 43, H.&T.C. Sur. T.D. 6,274 ft.; test sec. at 5,000 ft.; est. 6,000,000 cu. ft. gas on D.S.T.; tstg.; bailing 6,274 ft.; csg. cmt. at 5,000 ft.; R.U. control head for testing at est. 6,000,000 cu. ft. gas; plug drilled; tstd. wtr.; rng. more cement to 5,070 ft.

Potter County

Canadian River Gas Co.'s No. 1 City of Amarillo, in city limits just north of city. Prep. P.B. to 3,825 ft. and test; T.D. 5,012 ft.

Sherman County

I.T.I.O. Co.'s No. 1 S. C. Bryant, C NW¼ Sec. 369, Blk. T-1, T.&N.O. Sur. Fsg. job completed; prep. test at 4,200 ft.

Swisher County

Krupp-Flaherty's No. 1 Kleen, Sec. 120, Blk. 10-M, B.S.&M. Sur. S.D.O. 800 ft.

WEST TEXAS WILDCATS

Andrews County

Atlantic Refg. Co.'s No. 1-2 University, Sec. 2, Blk. 11, Univ. Lds. Sur. Loc.

Atlantic Refg. Co.'s No. 1-23 University, Sec. 23, Blk. 11, Univ. Lds. Sur. Loc.

Heimerich & Payne, Inc.'s No. 1 University, Sec. 11, Blk. 11, University Sur.; 5,500-ft. test. Drlg. 4,425 ft.

Cochran County

Texas Co.'s No. 1-F Mallett Land & Cattle Co., SW cor. Labor 25, Lge. 51, Scurry C.S.L. Sur. Loc.

Concho County

Floyd Dodson's No. 1 Wilson, Thomas Green Sur. 1; 3,500-ft. test. S.D.; csg. 3,398 ft.

Crane County

Gulf Oil Corp.'s No. 5 M. B. McKnight, Sec. 1, Blk. 21-B, P.S.L. Sur. Drlg. 6,500 ft.

Gulf Oil Corp.'s No. 1-F University, SE SE Sec. 22, Blk. 31, Univ. Sur. Drlg. below 280 ft.

Gulf Oil Corp.'s No. 12 Waddell, Sec. 30, Blk. 26-B, P.S.L. Sur. 12-in. 532 ft.; S.O. 3,215-20 ft.; S.S.G. 3,635 ft.; 8-in. csg. cmtd. 3,713 ft.; S.O. wtr. 3,763 ft.; tstg. 3,780 ft., mostly wtr.; drlg. 4,180 ft.

Gulf Oil Corp.'s No. 31 Waddell, Sec. 5 Blk. 24-B, P.S.L. Sur. Drlg. 3,560 ft. with 3,000 ft. of O.I.H.

Crockett County

Finance Oil Co.'s No. 1 Hoover, NW cor. SE Sec. 10, Blk. 1, G.C.&S.F. Sur. Loc.

Gregory & McCandless' No. 1 Shannon estate, 1,787 ft. from S and 3,107 ft. from E lines of Lge. 3, Archer C.S.L. Sur. Bldg. road.

Lewis & Shannon's No. 1 Noelke, SW cor. NE Sec. 30, Blk. GG, H.E.W.T. Sur. Top Yates sand 900 ft.; S.S.G. 995 ft.; W.O.C. 7-in. 1,015 ft.; S.I. to erect storage, 1,100 ft.

M. & M. Drlg. Co.'s No. 1 G. Bouscaren, SE cor. NW Sec. 29, Blk. G.G., H.E.& W.T. Sur., 1 mi. N of Soma discovery well; prep. D.D. below 500 ft.; last report.

Mauldin & Solmon's No. 1 Noelke, SE cor. Sec. 56, Blk. G.G., H.E.&W.T. Sur., ¾ mi. NW of Soma discovery well, Prep. spud.

Moore Expitn. Co.'s No. 1 A. C. Hoover, Sec. 16, Blk. 1, G.C.&S.F. Sur. C.O. cavings at 535 ft.; prep. resume drlg.

Moore Expitn. Co.'s No. 1 Noelke, Sec. 10, Blk. G.G. Made 7 B.O.P.D. swbg. from 2,150-2,233 ft.; pump. 7 bbl. oil hourly after acid from 2,338-71 ft.

Soma O. & G. Synd.'s No. 1 W. T. Noelke, NW part Sec. 30, Blk. GG, H. E.&W.T. Sur. Hit sat. at 1,035 ft.; 60 B.P.H. with 40,000,000 cu. ft. gas; bldg. storage; est. 50,000,000 cu. ft. gas and 788 B.O.P.D.

Dawson County

Ray Albaugh's No. 2 Robinson, NW NW Sec. 54, Blk. M, E.L.R.R. Sur. Drlg. 4,910 ft.

Ector County

Forest Dev. Corp.'s No. 1 W. P. Edwards, 467 ft. from N and E lines of Sec. 19, Blk. 43, Twp. 3s, T.&P. Sur. Loc.

M. A. Grisham et al's No. 1 R. B. Cowden, 600 ft. from N and E lines, Sec. 4, Blk. 45, Twp. 1n (deep test), T.&P. R.R. Sur. P.B. 4,490 ft.; T.D. 6,000 ft., made 144 B.O. in 12 hrs.; prep. shoot with 800 qt. at P.B. depth of 4,445 ft.

Llano Oil Co.'s No. 4-B Holt, NW NE Sec. 18, Blk. A, P.S.L. Sur., deep lime test. Loc.

Gaines County

Richmond Drlg. Co. et al's No. 1 G. R. Brumley, NE NE Sec. 17, Blk. 12-A, P.S.L. Sur. Drlg. 3,788 ft.

Howard County

R. M. Huff's No. 1 E. W. Douthitt, 330 ft. from W and 2,310 ft. from S lines of Sec. 116, Blk. 29, W.&N.W. Sur. Loc.

C. T. McLaughlin's No. 1 Pete Johnson, NE NE Sec. 34, Blk. 32, Twp. 1n, T. &P. Sur. Prep. spd.

M. L. Richards' No. 1 Thelma J. Cole, SE NW Sec. 12, Blk. 26, H.&T.C. Sur. 3,500-ft. test. Loc.

Hudspeth County

Haymon Krupp Oil & Ld. Co.'s No. 1 Briggs, Sec. 24, Blk. 73, Twp. 7, T.& P. Sur. T.D. 6,075 ft.

Mitchell County

B.R.S. Oil Co.'s No. 1 M. A. Berry, 407 ft. from S and E lines of Sec. 83, Blk. 97, H.&T.C. Sur. Drlg. 800 ft.

Dockery & Robbins' No. 1 C. G. Crawford, SW SW Sec. 13, C. A. O'Keefe subd. Prep. drill ahead below 250 ft.

J. B. Ewing's No. 1 L. A. Strain, 330 ft. from N and 2,970 ft. from W lines of Sec. 63, Blk. 97, H.&T.C. Sur. Spdg.

Ewing & Hanes' No. 1 G. I. Grable, Sec. 196, Blk. 3, H.&G.N. Sur.; 1,800-ft. test. Drlg. 1,780 ft.

N. V. Hilburn's No. 1 B. W. Jackson, NE cor. NW Sec. 82, Blk. 97, H.&T.C. Sur., in same section as No. 1 Strain. S.D. 50 ft.; prep. D.D.

N. V. Hilburn's No. 1 E. T. Strain, Sec. 82, Blk. 97, H.&T.C. Sur. S.D.O. 1,790 ft.; drld. sat. 1,706-32 ft. and 1,736-39 ft.; est. 4 B.O.P.D. naturally; prep. shoot.

Pecos County

B. McCandless and General Crude Oil Co.'s No. 1 Virginia W. Crockett, Sec. 5, Blk. 110, T.C.R.R. Sur. T. Ellenburger 4,401 ft.; tstg. est. 6,000,000 cu. ft. gas after acd.; rng. tbg.; T.D. 5,479 ft.; est. 4,000,000 cu. ft. gas and 365 B.O. P.D.; made 531 B.O. in 5 hrs.; S.I.

R. G. Pattillo's No. 1 P. E. O'Neal, SW SW Sec. 74, Blk. 10, H.&G.N. Sur., 5,000-ft. test. Drlg. 200 ft.

Plymouth Oil Co.'s No. 1 Richard Levy, SW cor. Sec. 104, Blk. 8, H.&G.N. Sur. Drlg. 3,648 ft.

H. H. Sides' No. 1 Blackstone-Slaughter, Sec. 29, Blk. 129, T.&St.L. Sur., 1,050 ft. W, 250 ft. S lines of section. Drlg. 905 ft.; no report.

Presidio County

H. D. Wilcox's No. 1 C. E. Conring, 500 ft. from the N and 2,080 ft. from the E lines of Sec. 102, Blk. 4, G.H.&S.A. Sur. Loc.

Reagan County

R. E. Ringo's No. 1 fee, 1,320 ft. from N and W lines of Sec. 22, Blk. K, 3,500-ft. test. Loc.

Reeves County

Roy Johnson's No. 1 H. L. Perkins. Drlg. 705 ft. last report.

Scurry County

Coffield & Guthrie, Inc.'s No. 1 J. W. Moar, Sec. 334, Blk. 97, H.&G.N. Sur., NW Sec.; 4,500-ft. test. Drlg. 3,505 ft.

Ordovician Oil Co.'s No. 1 O. L. Burney, NW NW Sec. 146, Blk. 97, H.&T.C. Sur. Drlg. 1,000 ft.

Stonewall County

Shell Oil Co., Inc.'s No. 1 Smith, Sec. 143, Blk. 1, H.&T.C. Sur. Top Mississippian at 6,007 ft., top saturation at 6,015 ft. and drilled to T.D. 6,028 ft. in saturation; flwd. 280 bbl. oil in 24 hrs.; prep. cmt. csg. for test. T.D. 6,028 ft., showing some free oil, prep. test.

Terrell County

E. M. Thomasson's No. 2 Bates, Sec. 30, Blk. 1, I.&G.N. Sur. Prep. abd. 1,531 ft.

Terry County

Ray Albaugh's No. 1 Frances Christian, NW cor. Sec. 49, Blk. T, D.&W. Sur., 5,500-ft. test. Loc.

Denver Prod. & Ref. Co.'s No. 1 Ima Lewis, SE SE Sec. 62, Blk. DD, J. H. Gibson Sur. W.O.R. 165 ft.

J. M. Welborn's No. 1 W. E. Bailey, NW NW Sec. 103, Blk. 4-A, C.M.&R.R. Sur., 5,400-ft. test. Loc.

Tom Green County

Dan Short's No. 1 J. G. Davidson, 2,161 ft. from SL, 2,493 ft. from NW cor. L. P. Moore Sur. S.S.O.&G. 2,660-65 ft.; S.D. 3,410 ft.; undecided whether to run csg. or abd.

Ward County

Atlantic Ref. Co.'s No. 1 Wickett-University, Sec. 12, Blk. 16, University Lds. Sur., 1,980 ft. N and E lines of section. Prep. D.D. 2,733 ft.; S.S.O. 2,670-2,677 ft.; est. 380,000 cu. ft. gas; flwd. 30 to 40 bbl. oil hourly 2,892 to 2,907 ft.; flwd. 445 B.O. and 1,487 B.W. in 24 hrs.; made 458 bbl. oil and 357 bbl. water in 24 hrs.; P.B. to 2,912 ft. to shut off wtr.; prep. treat with 2,000 gal.

Gulf Oil Corp.'s No. 5 Wristen, Sec. 13, Blk. 5, H.&T.C. Sur.; scheduled Ordovician test, Drlg. 7,450 ft.

Kenneth Slack's No. 1 Bird Hayes, Sec. 148, Blk. 34, H.&T.C. Sur. T. Delaware 5,003 ft.; S.D. 5,010 ft.; T. Dela. sd. and hit est. 15,000,000 cu. ft. gas at 5,050 ft. and gas ignited; making 10,000,000 cu. ft. gas daily; made 1 bbl. oil hourly on test; later made est. 2 bbl. hourly; 5,063-88 ft., T.D.

Winkler County

Gulf Oil Corp.'s No. 130 O'Brien, SE SW Sec. 11, Blk. F, G.M.M.B.&A. Sur. Drlg. 1,100 ft.

Gulf Oil Corp.'s No. 1-A Scarborough, Sec. 7, Blk. 22-C, P.S.L. Sur., 1 mile N of Keystone field. S.D.O. 4,276 ft., sulf. wtr.

Yoakum County

Amerada Pet. Corp.'s No. 1 A. M. Brownfield, NE SW Sec. 620, Blk. D, Gibson Sur., 5,500-ft. test. Loc.

Canadian Fields

(Continued from Page 88

Union Gas Co.'s No. 49, Lot 140, North Talbot Road, Raleigh Township, finished at 1,520 ft. with 1,500,000 cu. ft. a day, natural flow.

In Harwich Township, Kent County, Snell Syndicate's No. 1, Harold English farm, is in the Trenton lime below 3,475 ft. and looks like a dry hole.

In Plympton Township, Lambton County, Jackson & Ogletree's No. 1, Lot 3, Concession 5, finished a dry hole in the big red at 2,925 ft. In Bosanquet Township George Willets' No. 1 shallow test, S½ Lot 30, south of the Canada Cut, finished a dry hole at 470 ft.

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	March 31, 1940	February 29, 1940	March changes	March 31, 1939
1 Gasoline-bearing crude	35,804,861	35,995,435	—190,574	39,215,749
2 Nongasoline-bearing crude	13,499,792	13,405,906	+93,886	15,808,425
3 Unblended natural gasoline	1,875,107	1,747,755	+127,352	2,137,837
4 Gasoline (not including distributing and service stations)	17,572,852	17,678,049	—105,197	15,805,417
5 Naphtha distillates	*1,565,034	*1,413,829	+151,205	*1,384,449
6 Gas oil and diesel oil	9,326,881	8,980,220	+346,661	10,382,404
7 Fuel-oil residuum	64,947,259	65,648,712	—701,453	70,551,947
8 All other stocks	†8,388,953	†8,339,383	+49,570	†6,306,740
Total	152,980,739	153,209,280	—228,550	161,592,968
*Estimated amount of unfinished gasoline contained in item No. 5	1,366,700	1,163,797	.....	1,184,846
†Coke included in item No. 8	1,146,960	1,083,825	.....	169,832

Net Incomes for 32 Companies Up 4.5 Per Cent

(Continued from Page 25)

per cent of the group's total net profits. Together these four companies reported net income of $175,606,614 in 1939 as compared with $172,807,715 in 1938, an increase of 1.6 per cent. Combined assets of these four Standards as of the close of 1939 totaled $4,316,340,071, or almost half the total assets of the entire group.

The four leading independent oil companies—Consolidated Oil, Gulf Oil, Shell Union and Texas Corp.—showed a considerably larger percentage increase in their combined earnings. Net profits of these companies totaled $67,549,180 in 1939 as compared with $55,212,240 in 1938, or an increase of 22 per cent. Their earnings last year were equivalent to 19 per cent of the group's total as against 16 per cent in the preceding year and their combined assets amounted to 22 per cent of the total of the 32 companies.

Largest Earner

Standard Oil Co. of New Jersey, the largest member of the group in respect to total assets, was again the largest earner, reporting net income of $89,128,756 compared with $76,053,170 in 1938. Socony-Vacuum Oil Co., ranking second as to assets and earnings, reported net profits of $34,452,710 as against $40,106,917. Standard Oil Co. of Indiana, third largest in point of size, was also third with

COMPARISON OF ASSETS, LIABILITIES, CURRENT POSITION,

	Assets							Liabilities		
	Properties, plant and equipment	Net fixed assets	Permanent investments and advances	Cash and marketable securities	Inventories, crude and refined oil	Total current assets	Total assets	Common stock	Preferred stock	Funded and/or other long-term debt
Amerada Petroleum Corp.:										
1939	$52,732,377	$11,801,630	$849,593	$2,186,867	$140,727	$3,997,060	$19,415,348	13,581,375	.....	.....
1938	51,622,753	11,591,428	764,593	2,976,414	133,670	4,590,599	19,732,582	13,581,375	.....	.....
Atlantic Refining Co.:										
1939	250,186,634	144,784,942	4,335,146	17,533,994	21,841,951	52,932,433	203,400,377	66,599,975	14,800,000	$25,249,849
1938	240,238,182	142,172,291	4,459,939	14,738,608	21,827,938	51,144,959	199,058,436	66,599,975	14,800,000	25,406,849
Barnsdall Oil Co.:										
1939	[3]33,369,082	[4]11,671,041	7,400,396	3,785,107	851,958	6,129,301	25,762,819	11,293,895	.....	7,575,979
1938	[3]33,020,354	[4]11,416,401	7,746,671	1,549,524	562,608	5,010,076	24,863,219	11,251,720	.....	5,089,201
Consolidated Oil Corp.:										
1939	339,428,247	196,742,476	27,957,070	58,060,502	41,684,190	121,911,155	357,848,818	71,094,175	.....	70,481,429
1938	326,888,659	201,583,988	28,375,340	59,208,679	40,870,220	120,681,899	362,145,344	71,094,175	.....	72,179,196
Continental Oil Co.:										
1939	173,242,470	63,132,257	14,090,266	20,850,728	19,373,790	47,922,214	127,661,986	23,692,966	.....	21,071,600
1938	155,874,934	55,862,435	13,343,995	24,475,908	21,273,165	53,996,475	125,112,858	23,692,966	.....	21,071,600
Empire Gas & Fuel Co.:										
1939	*391,040,529	*279,270,230	11,833,151	6,247,014	12,813,572	29,260,951	324,054,043	37,405,357	54,424,737	[7]91,182,813
1938	*399,530,380	*288,788,049	11,923,880	5,923,978	15,529,465	32,121,470	337,109,054	37,405,357	54,424,737	[7]96,201,977
Gulf Oil Corp.:										
1939	760,670,316	351,936,147	32,118,344	38,684,596	56,393,002	134,746,999	523,292,917	226,905,050	.....	51,112,595
1938	737,655,462	350,468,996	31,062,075	40,182,870	60,113,321	160,491,131	546,870,596	226,905,050	.....	75,613,092
Houston Oil Co. of Texas:										
1939	62,722,385	41,171,890	6,367,044	4,671,272	147,576	6,116,758	54,152,425	27,465,450	8,947,600	9,535,000
1938	61,533,677	42,042,351	6,346,323	1,770,622	404,754	3,519,574	52,113,772	27,465,450	8,947,600	6,907,500
Humble Oil & Refining Co.:										
1939	472,021,569	304,322,125	7,401,608	20,449,690	24,256,276	60,704,791	375,447,820	175,000,000	.....	42,721,437
1938	451,865,186	295,440,883	7,613,689	16,481,862	24,717,971	57,852,702	363,570,276	175,000,000	.....	42,640,804
Lion Oil Refining Co.:										
1939	23,795,034	13,015,584	113,530	628,107	1,440,593	3,724,072	17,274,430	7,610,180	.....	6,134,942
1938	22,359,414	12,470,017	290,010	1,242,054	1,395,971	4,174,005	17,442,864	7,594,240	.....	6,891,430
Mid-Continent Pet. Corp.:										
1939	94,565,652	37,668,405	3,309,911	10,607,848	8,375,432	23,588,890	65,103,572	18,579,120	.....	.....
1938	93,256,355	38,158,682	3,532,607	7,966,818	8,945,056	21,495,454	63,692,348	18,579,120	.....	.....
Ohio Oil Co.:										
1939	264,324,147	90,583,528	6,926,482	14,364,542	14,666,077	35,618,648	133,748,393	59,235,791	35,453,700	18,000,000
1938	266,996,537	90,328,461	7,160,765	9,100,702	19,189,010	34,298,721	138,670,109	59,235,791	35,453,700	20,000,000
Pacific Western Oil Corp.:										
1939	20,532,689	8,008,705	11,668,885	372,302	66,038	716,311	20,807,851	10,000,000	.....	3,061,750
1938	20,326,383	8,252,145	11,877,085	208,773	64,803	557,020	20,873,841	10,000,000	.....	3,226,750
Phillips Petroleum Co.:										
1939	352,776,902	174,933,218	3,513,800	11,210,836	17,611,115	39,257,605	223,280,318	132,686,674	.....	33,598,517
1938	327,894,506	160,683,925	3,238,018	28,054,336	17,558,390	56,562,787	226,742,375	132,686,674	.....	41,417,920
Plymouth Oil Co.:										
1939	21,495,846	9,665,608	1,785,968	888,486	29,130	1,723,666	13,582,644	5,250,000	.....	2,415,000
1938	19,775,920	8,908,223	1,586,007	1,189,651	24,232	2,010,911	12,943,734	5,250,000	.....	1,585,000
Pure Oil Co.:										
1939	[11]228,344,044	[11]131,909,523	12,026,293	8,915,476	13,404,821	33,791,709	178,567,387	39,820,310	72,543,100	2,361,852
1938	[11]227,106,237	[11]132,685,441	12,025,181	7,222,102	15,428,336	34,710,229	180,363,078	39,820,310	72,543,100	2,455,686
Richfield Oil Corp.:										
1939	67,273,983	53,064,190	230,923	14,958,880	14,546,740	35,247,526	90,589,585	74,670,873	.....	9,512,915
1938	63,245,991	54,631,115	389,658	12,532,639	15,341,423	32,056,426	89,127,442	74,670,873	.....	9,433,000
Seaboard Oil Co.:										
1939	[12]6,949,952	[13]3,988,415	2,443,448	2,204,300	104,662	3,216,548	9,975,317	4,977,532	.....	.....
1938	[12]5,602,003	[13]2,968,905	2,894,926	2,182,097	126,124	3,107,093	9,190,185	4,977,532	.....	.....
Shell Union Oil Corp.:										
1939	649,554,365	261,105,471	11,547,660	49,904,773	40,448,953	117,736,637	401,048,417	233,672,821	35,071,800	85,000,000
1938	638,370,390	262,819,975	13,098,821	46,080,659	41,795,273	113,766,144	399,399,214	233,672,821	36,038,000	82,879,828
Skelly Oil Co.:										
1939	105,601,918	45,009,731	4,702,167	3,814,423	3,068,120	11,731,242	62,048,510	14,930,229	6,300,000	9,000,000
1938	102,155,436	44,455,396	4,646,953	4,377,656	3,643,404	12,280,998	62,040,073	14,930,229	6,450,000	9,026,681
Socony-Vacuum Oil Co., Inc.:[15]										
1939	990,735,075	493,139,414	175,696,944	73,552,169	106,756,433	245,299,658	929,652,687	475,626,780	.....	126,419,256
1938	983,730,779	479,173,355	133,130,604	100,548,807	124,864,519	294,725,728	923,438,918	475,626,780	.....	127,511,486
South Penn Oil Co.:										
1939	114,222,574	22,403,161	9,559,548	7,737,972	4,694,387	14,420,119	46,569,715	25,000,000	.....	.....
1938	113,655,743	15,458,070	9,559,548	6,375,824	5,693,823	13,667,168	38,986,133	25,000,000	.....	.....
Standard Oil of California:										
1939	753,666,275	446,839,002	62,460,020	41,959,019	36,849,564	105,272,599	628,618,202	327,572,500	.....	25,000,000
1938	745,857,846	449,350,905	62,545,179	20,854,941	35,036,323	82,618,129	605,137,556	327,572,500	.....	.....
Standard Oil of Indiana:										
1939	739,358,059	378,973,235	108,252,302	96,957,558	81,004,641	226,010,255	723,079,697	381,800,358	.....	8,713,073
1938	[14]736,216,838	[14]394,827,700	109,366,230	77,180,079	97,825,094	211,858,082	724,663,142	381,800,504	.....	10,346,658
Standard Oil of Kentucky:										
1939	36,625,162	21,133,871	504,280	8,948,625	6,853,317	20,838,076	42,697,777	26,047,957	.....	.....
1938	35,683,276	21,273,524	483,402	8,756,634	5,612,167	19,121,872	41,056,534	26,047,965	.....	.....
Standard Oil of New Jersey:[15]										
1939	[16]2,404,745,727	[17]1,121,061,376	242,860,070	246,147,800	181,361,428	595,717,796	2,034,989,485	682,147,972	.....	190,638,179
1938	[16]2,553,193,554	[17]1,172,251,955	123,201,590	248,969,721	218,655,081	667,346,196	2,044,635,257	665,451,617	.....	192,850,838
Standard Oil of Ohio:										
1939	71,548,512	43,965,974	3,627,112	12,586,905	8,478,425	26,823,400	76,072,532	18,843,500	12,000,000	6,702,972
1938	71,070,346	42,644,255	3,274,492	10,479,856	7,672,422	22,653,008	70,547,617	18,843,500	12,000,000	6,929,357
Sun Oil Co.:										
1939	151,471,941	84,353,938	14,914,090	15,309,574	15,536,557	45,891,879	146,431,484	79,497,347	10,000,000	21,275,033
1938	146,376,365	79,192,720	14,963,301	14,072,141	17,568,908	43,821,896	139,139,150	79,346,439	10,000,000	21,386,250
Texas Corp.:										
1939	670,490,215	354,847,255	106,577,813	65,475,022	78,208,987	188,658,770	661,067,032	271,903,475	.....	102,521,409
1938	638,959,533	340,738,659	93,039,240	29,553,114	90,350,219	160,639,725	605,360,644	271,922,050	.....	62,869,727
Texas Pacific Coal & Oil Co.:										
1939	22,860,435	10,379,294	5,274	406,711	142,529	1,071,045	11,627,409	8,882,361	.....	.....
1938	22,386,183	9,788,088	5,465	554,608	143,179	1,175,412	11,168,356	8,882,361	.....	.....
Tide Water Associated Oil Co.:										
1939	313,115,433	126,832,690	18,864,588	12,706,730	28,676,391	55,575,841	204,467,844	63,799,395	50,000,000	36,250,000
1938	306,760,736	126,130,786	18,143,939	10,695,941	30,948,506	55,163,895	202,748,559	63,762,625	50,000,000	37,680,000
Union Oil Co. of California:										
1939	261,569,129	116,536,861	10,242,699	25,945,059	21,924,730	58,641,856	187,066,400	116,656,750	.....	38,018,500
1938	254,961,701	115,792,578	930,188	11,752,909	25,679,267	47,773,121	165,993,365	116,656,750	.....	18,018,500
Total 1939	$10,901,036,678	$5,454,251,157	$924,186,425	$898,072,887	$861,752,112	$2,354,295,810	$8,919,403,241	$3,732,250,168	$299,540,937	$1,043,554,100
Total 1938	10,854,271,659	5,468,341,702	741,019,714	827,260,527	968,994,642	2,424,992,911	8,823,936,631	3,715,326,749	300,657,137	999,619,330

* Deficit or loss.

1. Per common share earnings are based on number of shares actually outstanding, computed after allowing for the year's preferred divided requirements.
2. Total cash dividends paid on preferred and/or common stocks.
3. Represents actual number of shares outstanding and does not include reacquired or treasury stock where such figures are available.
4. Plant and equipment only; oil and gas leaseholds are carried at $1.
5. Depreciation and intangible development costs only, no depletion being charged since lease purchases are charged directly to income.
6. Includes intangibles of $25,808,432 in 1939 and $26,576,105 in 1938.
7. Does not include amounts due to parent company amounting to $76,919,101 in 1939 and $85,270,885 in 1938.
8. Earned per preferred share; common stock all owned by Cities Service.
9. Represents preferred dividends only.
10. Excess of current liabilities over current assets.
11. Includes contracts, rights, patents, trademarks, etc., amounting to $19,425,001

regard to earnings, reporting net income of $34,142,643 as against $27,771,975 in 1938. Texas Corp., which in 1938 ranked fifth as to assets and earnings, improved its position to fourth in both respects, surpassing Standard Oil Co. of California, which had held that position previously. Texas Corp.'s earnings of $32,886,807 last year compared with $23,139,030 in 1938.

Gross operating revenues of the 32 companies declined 5.6 per cent to $4,467,835,619 in 1939 from the total of $4,734,334,319 in 1938. The smaller dollar value of sales, despite the record volume of products sold by the industry last year, reflects in part the lower average prices which prevailed for crude oil and refined products throughout most of 1938 as compared with the preceding year. Another factor responsible for the decline in revenues reported by the group is the fact that Socony-Vacuum and Standard Oil of New Jersey eliminated from consolidation in their 1939 reports the operations of subsidiaries operating in countries in the combat area.

The composite balance sheet for the group as of December 31, 1939, showed total assets of $8,919,403,241, an increase of $96,466,610 over the 1938 year end. Combined current assets at the close of 1939 amounted to $2,354,295,810 as compared with $2,424,992,911 the year before, while current liabilities of $553,271,866 on December 31, 1939, compared with $594,826,875 a year earlier. The ratio of current assets to current liabilities at the end of 1939 was 4.2 as compared with 4.1 on December 31, 1938.

Comparative assets, liabilities, financial condition, earnings and dividends of the 32 companies for 1939 and 1938 are shown in the accompanying tabulation.

CAPITAL AND EARNINGS OF MAJOR OIL COMPANIES IN 1939

	Liabilities				Income account					
	Earned surplus	Capital surplus	Total current liabilities	Indicated net working capital	Gross operating income	Depreciation depletion, etc.	Net income	Net income per common share[1]	Total cash dividends paid[2]	Common shares outstanding[3]
Amerada Petroleum Corp.:										
1939	$4,576,156	.....	$949,707	$3,047,353	$9,983,958	$4,706,260	$1,230,764	$1.56	$1,577,350	788,675
1938	4,922,742	.....	909,799	3,680,800	11,327,318	5,279,357	1,634,486	2.07	1,577,350	(No par)
Atlantic Refining Co.:										
1939	67,940,278	$10,113,276	10,524,307	42,408,126	126,902,685	16,181,585	5,023,282	1.66	3,255,999	2,663,999
1938	63,157,675	10,113,292	10,421,235	40,723,724	125,731,247	14,307,565	4,310,659	1.40	3,255,999	($25 par)
Barnsdall Oil Co.:										
1939	.....	4,999,629	1,594,624	4,534,677	10,325,676	[5]3,392,895	1,720,292	0.76	2,020,984	2,258,779
1938	[4]489,695	6,436,937	2,125,735	2,884,341	12,495,417	[5]4,432,851	2,837,897	1.26	2,245,951	($5 par)
Consolidated Oil Corp.:										
1939	18,186,509	165,404,476	23,731,745	98,179,410	215,337,552	24,157,092	7,540,880	0.55	10,998,917	13,751,726
1938	21,644,545	165,404,476	22,807,410	97,874,489	214,760,350	24,230,995	7,737,712	0.55	11,293,126	(No par)
Continental Oil Co.:										
1939	22,110,235	49,102,899	9,078,081	38,844,133	81,111,389	15,198,577	6,304,504	1.35	4,682,384	4,682,572
1938	20,488,115	49,102,899	8,243,414	45,753,061	80,151,182	14,127,575	5,139,755	1.10	4,682,387	($5 par)
Empire Gas & Fuel Co.:										
1939	1,029,890	15,041,958	14,740,420	14,520,531	82,119,139	15,986,729	231,222	[6]0.42	.....	750,000
1938	1,291,306	14,947,509	12,977,603	19,143,867	82,024,125	14,872,769	2,027,414	[5]3.73	.....	(No par)
Gulf Oil Corp.:										
1939	94,782,969	17,146,573	37,212,985	97,534,014	276,689,026	40,482,106	15,315,781	1.69	9,076,202	9,076,202
1938	98,162,118	17,146,573	33,660,902	126,830,235	266,328,688	40,127,689	13,017,076	1.43	9,076,202	($25 par)
Houston Oil Co. of Texas:										
1939	7,324,469	.....	879,905	5,236,853	7,444,811	1,755,569	1,010,530	0.43	[5]536,856	1,098,618
1938	7,880,403	.....	912,818	2,606,756	7,865,249	1,788,133	1,304,736	0.70	[5]536,856	($25 par)
Humble Oil & Refining Co.:										
1939	131,855,013	554,912	20,405,852	40,298,939	199,500,588	26,554,633	29,950,287	3.33	17,975,680	8,987,840
1938	120,108,671	554,912	20,412,158	37,440,544	205,458,293	27,275,364	35,800,353	3.98	17,975,680	(No par)
Lion Oil Refining Co.:										
1939	1,016,219	.....	2,513,088	1,210,984	10,831,474	1,639,943	652,352	1.50	434,989	435,814
1938	1,057,590	.....	1,899,602	2,274,403	11,329,784	1,316,740	912,482	2.09	437,847	(No par)
Mid-Continent Pet. Corp.:										
1939	20,700,324	21,294,221	3,449,309	20,139,581	38,258,785	3,947,883	2,650,501	1.43	1,119,070	1,857,912
1938	19,168,892	22,140,239	2,881,202	18,614,252	38,413,249	4,041,417	1,043,791	0.56	1,119,855	($10 par)
Ohio Oil Co.:										
1939	6,975,609	8,620,850	5,149,916	30,468,732	54,807,382	13,236,441	1,492,086	0.10	[7]2,127,222	6,563,377
1938	7,610,744	8,620,850	5,958,397	28,340,324	54,334,074	11,162,293	4,582,964	0.25	4,250,527	(No par)
Pacific Western Oil Corp.:										
1939	3,507,014	3,416,500	750,862	[10]34,551	2,476,612	840,584	813,689	0.81	400,000	1,000,000
1938	3,351,056	3,416,500	762,626	[10]205,606	3,175,661	1,169,847	1,212,377	1.22	500,000	($10 par)
Phillips Petroleum Co.:										
1939	38,389,000	.....	14,951,800	24,305,805	112,928,532	18,560,253	9,833,314	2.21	8,898,104	4,449,052
1938	37,453,790	.....	12,900,582	43,662,205	111,899,260	20,110,260	9,049,122	2.03	8,898,096	(No par)
Plymouth Oil Co.:										
1939	4,402,468	.....	777,143	946,523	6,804,301	1,412,880	2,475,052	2.38	[11]1,470,000	1,038,633
1938	4,124,927	.....	1,656,852	354,059	7,136,726	1,514,048	2,609,091	2.59	1,422,435	($5 par)
Pure Oil Co.:										
1939	22,574,375	28,207,088	10,604,954	23,186,755	94,286,586	9,709,911	8,290,418	[8]1.11	4,880,756	3,982,031
1938	19,164,713	28,438,897	14,916,447	19,793,782	104,741,634	8,924,780	5,412,903	0.38	[9]3,882,939	(No par)
Richfield Oil Corp.:										
1939	1,048,827	.....	5,194,741	30,052,785	42,910,105	6,882,147	2,601,926	0.65	2,003,509	4,010,000
1938	450,410	.....	4,240,489	27,815,937	39,242,273	6,061,847	2,042,955	0.51	2,002,341	(No par)
Seaboard Oil Co.:										
1939	3,062,795	434,067	909,804	2,306,744	7,314,829	2,829,821	1,746,464	1.40	1,244,383	1,244,383
1938	2,560,714	434,067	738,518	2,368,575	8,146,924	3,409,262	1,895,790	1.52	1,244,383	(No par)
Shell Union Oil Corp.:										
1939	16,872,684	.....	29,974,547	87,762,090	248,402,482	41,521,632	11,805,712	0.76	8,411,376	13,070,625
1938	17,661,533	.....	29,147,031	84,619,113	252,831,764	40,147,413	11,318,422	0.72	11,025,501	(No par)
Skelly Oil Co.:										
1939	12,417,250	13,164,658	3,942,449	7,788,798	33,107,181	5,051,454	2,360,783	1.99	1,126,761	995,349
1938	11,432,065	13,156,183	4,722,091	7,558,907	35,880,450	5,589,774	2,650,055	2.27	1,485,023	($15 par)
Socony-Vacuum Oil Co., Inc.:[12]										
1939	125,820,351	106,694,225	55,942,575	189,357,083	495,659,064	46,212,376	34,452,710	1.10	15,603,035	31,206,071
1938	106,970,676	106,694,225	70,218,859	224,506,869	554,213,976	43,410,507	40,106,917	1.29	15,575,535	($15 par)
South Penn Oil Co.:										
1939	18,288,748	.....	1,655,853	12,764,266	27,505,596	1,654,906	2,837,042	2.84	3,000,000	1,000,000
1938	11,739,722	.....	1,257,694	12,409,474	25,931,104	1,945,194	1,441,818	1.44	1,750,000	($25 par)
Standard Oil of California:										
1939	67,384,847	167,947,621	17,177,375	88,095,224	177,650,184	27,709,290	17,882,505	1.38	14,413,190	13,003,953
1938	69,019,413	167,947,621	18,128,596	64,489,533	180,848,129	27,080,068	28,875,653	2.22	18,206,795	($25 par)
Standard Oil of Indiana:										
1939	163,620,413	114,096,071	39,172,806	186,837,449	344,450,441	35,178,965	34,142,643	2.24	19,090,029	15,272,014
1938	148,416,908	132,433,418	37,130,628	174,727,454	335,996,016	36,546,729	27,771,975	1.82	15,271,268	($25 par)
Standard Oil of Kentucky:										
1939	7,751,405	1,638,380	7,210,033	13,628,043	53,181,672	1,486,055	3,979,562	1.53	3,386,228	2,604,796
1938	7,158,072	1,638,374	6,162,124	12,959,748	51,541,128	1,334,062	3,779,706	1.45	3,255,989	($10 par)
Standard Oil of New Jersey:[13]										
1939	513,438,915	79,887,975	129,110,598	466,607,198	933,766,173	98,716,992	89,128,756	3.26	[14]33,461,089	27,280,998
1938	482,262,264	80,600,761	177,662,058	489,684,138	1,173,729,821	111,467,598	76,053,170	2.86	[14]39,329,769	($25 par)
Standard Oil of Ohio:										
1939	18,835,137	4,345,071	11,419,776	15,403,624	65,115,144	3,524,296	5,602,499	6.64	1,730,610	753,740
1938	14,982,707	4,345,070	8,933,202	13,719,806	55,306,628	2,942,489	1,964,605	1.81	1,353,740	($25 par)
Sun Oil Co.:										
1939	15,091,224	.....	16,046,846	29,845,033	131,474,558	13,071,326	6,959,677	2.74	2,918,401	2,318,918
1938	11,182,964	.....	12,736,277	31,085,619	115,047,237	13,496,953	3,085,119	1.07	2,915,786	(No par)
Texas Corp.:										
1939	130,133,899	69,902,160	52,235,725	136,423,045	365,312,019	41,546,815	32,886,807	3.02	21,752,278	10,876,139
1938	118,999,370	69,913,512	46,859,545	113,780,180	348,922,047	36,200,591	23,139,030	2.13	21,750,321	($25 par)
Texas Pacific Coal & Oil Co.:										
1939	2,233,360	141,628	365,940	705,105	3,799,579	605,987	889,938	1.00	354,904	888,236
1938	1,864,026	141,628	275,881	899,531	4,049,381	625,294	1,035,598	1.16	354,876	($10 par)
Tide Water Associated Oil Co.:										
1939	33,094,647	.....	15,557,121	40,018,720	131,960,505	15,095,540	8,958,971	1.05	7,343,308	6,368,667
1938	30,462,068	.....	14,802,064	40,361,831	137,383,719	15,119,591	10,427,273	1.28	8,621,562	($10 par)
Union Oil Co. of California:										
1939	18,651,053	3,699,117	10,040,979	48,900,877	76,417,591	10,030,360	5,846,241	1.25	4,899,583	4,666,270
1938	19,253,961	3,699,117	8,365,036	39,408,085	78,091,465	9,862,031	6,862,758	1.47	5,599,524	($25 par)
Total 1939	$1,593,116,083	$885,853,355	$553,271,866	$1,801,023,944	$4,467,835,619	$548,881,303	$356,154,046	....	$210,193,197	.....
Total 1938	1,483,514,465	907,227,060	594,826,875	1,830,166,036	4,734,334,319	549,586,516	341,083,662	....	220,897,663	.....

in 1939 and $19,693,134 in 1938.

12. Excludes assets in Mexico of $5,787,159 and in Venezuela of $321,555 for which full reserves have been set up.
13. Subsidiaries operating in countries in the combat area have been eliminated from consolidation in 1939 and figures are not directly comparable with those for 1938. Net assets of these subsidiaries are stated as an investment in the 1939 balance sheet, in the case of Socony-Vacuum in the amount of $37,612,779 and for Standard Oil of New Jersey at $124,184,855.
14. Includes excess of cost over book value of investments in acquired subsidiaries and good will, patents, etc., totaling $21,414,880 which item was charged to capital surplus in 1939.
15. Includes patents, copyrights, good will, etc., amounting to $41,749,210 in 1939 and $42,287,230 in 1938 or $24,199,986 and $26,189,910 net, in the respective years.
16. In addition to cash dividends, stock dividends of five shares for each 200 shares outstanding was paid in 1939 and three shares for each 200 shares held in 1938.
17. In addition, stock dividends totaling 4 per cent were paid in 1939.

Mississippi Leasing Drops But Wildcatting Continues

By GEORGE WEBER

JACKSON, Miss., June 3.—A further decline in leasing, without perceptible drop in wildcatting activity, marked Mississippi developments during the past week, without any important shows in current tests. Pickens is beginning as a drilling field, having been defined on the northeast and extended to the south, and Tinsley's activity is dropping off, with a weaker crude demand.

The disappointing results of the past several weeks, which saw numerous wildcats drilled through the Selma chalk, the Eutaw and Tuscaloosa formations in Central Mississippi without oil or gas shows, may be offset somewhat by the opinion of a consulting geologist, Joe Dawson, expressed last week in Hot Springs, Ark., before the National Oil Scouts and Land Men's Association. (See p. 19 this issue.)

Geophysical activity continues strong in Mississippi and Alabama, with 64 crews shooting in Mississippi, mostly in north and north central sections, and seven parties in Alabama, which is increasing in interest.

Production at Pickens increased last week, averaging 1,290 bbl. daily from two wells, with accumulative production reaching over 25,000 bbl. by May 29. Tinsley production averages about 8,000 bbl. and accumulative production has reached about 1,100,000 bbl. to date.

Four wildcats, having drilled to the Tuscaloosa formation, were abandoned during the past week. In Hinds County, Royal Oil & Gas Co. and others' No. 1 Hinds County land, reached a total depth of 7,647 ft,, having encountered four good sand bodies, apparently without sufficient structure, for no shows were encountered. This test, in NE SW NE Section 33-5n-2w, was believed to test a structure against a fault, with an indicated 500 ft. of closure. No tops have been announced yet.

Exchange Oil Co. has abandoned No. 1 Thurmond, Holmes County, at 5,002 ft., in the Tuscaloosa formation. In Scott County, E. L. Martin's No. 1 Adams Edgar Lumber Co., having had sands in the Eutaw and Tuscaloosa formations, is abandoned without oil shows, at total depth of 6,525 ft. Another wildcat is to be drilled in the vicinity of this dry hole shortly, it is reported. Wayne County's only current active wildcat, Hill & Hill's and W. L. Stewart's No. 1 Kalmia Realty Co., encountered a thick chalk section topped at 5,141 ft., and drilled to 6,723 ft., where it was abandoned. A dead-oil show at 1,270-75 ft. with a slight show of gas was reported last month in this wildcat, probably in the Wilcox formation.

Tinsley has two new producers, one, Hassie Hunt's No. 1 H. A. Lammons, extending production one location to the north. Drilling, recently showing a marked decline at Tinsley, may be expected to be light in view of a weak crude demand. The erection of a refinery at Vicksburg, planned by E. C. Johnston of Longview, producer in the field, will serve as an important outlet for Tinsley crude with a probable ready outlet for refined products in the immediate Vicksburg-Jackson area. Tinsley's other new producer, Union Producing Co.'s No. 2-A Friley, is in the missing Woodruff sand area, south end, and is producing from a sand body below the Stevens sand, in the Eutaw formation, according to some geologic opinion.

MISSISSIPPI COMPLETIONS

Wildcats—Hinds County

Royal Oil & Gas Co. and others' No. 1 Hinds County land, NE SW NE Section 33-5n-2w, dry and abandoned 7,647 ft. Top of chalk 5,310 ft.

Holmes County

Exchange Oil Co.'s No. 1 W. M. Thurmond, 2,310 ft. SE cor. Section 21-15n-3e, dry and abandoned 5,003 ft., top Tuscaloosa 4,420 ft.

Scott County

E. L. Martin's No. 1 Adams Edgar Lumber Co., C S½ SE SW Section 25-8n-6e, dry and abandoned, 6,525 ft.

Wayne County

Hill & Hill and W. L. Stewart's No. 1 Kalmia Realty Co., C SW NW Section 5-7n-9w, dry and abandoned 6,723 ft., top chalk 5,141 ft.

Pickens—Yazoo County

Exchange Oil Co.'s No. 1 L. B. Dixon, C SW SW SW Section 29-12n-3e, top Eutaw formation 4,915 ft., salt-water sands 5,054-68, 5,143-55, and 5,233-68 ft., total depth 5,280 ft., dry and abandoned.

Tinsley—Yazoo County

Hassie Hunt's No. 1 H. A. Lammons, SE NW Section 1-10-3, 240 bbl., ¾-in. choke, Woodruff sand 4,819-53 ft., perforated casing 4,820-53 ft., total depth 5,290 ft. Union Producing Co.'s No. 2-A G. A. Friley, C NE SE Section 14-10-3, 376 bbl., ¼-in. choke, casing pressure 50 lb., tubing pressure 100 lb., set 7-in. casing 4,967 ft., perforated 4,912-21 ft., total depth 4,969 ft.

MISSISSIPPI

Holmes County

Exchange Oil Co.'s No. 1 S. D. Gwin, 2,170 ft. S line, 1,470 ft. E line, Sec. 6-16n-1e. Drlg. sd.&sh. 2,023 ft.

L. A. Hawkins' No. 1 B. W. Humphrey, 1,980 ft. S, 330 ft. W NE cor. Sec. 33-13n-2e. Set 10¾-in. csg. 700 ft.; S.D.; W.O. D.S.

Hawkins & Howell's (A. C. Varner's) No. 1 P. S. Jones, Sec. 27-15n-1e. Set 10¾-in. csg. 518 ft.; cg. 4,753 ft.

A. H. Rowan's No. 1 Eakin, C NW SE Sec. 20-14n-1e. Set surf. csg.; drlg. ch. 4,463 ft.

Itawamba County

G. C. Grasty et al's No. 1 Ky. Lbr. Co., 1,320 ft. E, 660 ft. S, C Sec. 7-10s-10e. Twisted off D.S.; skd. 24 ft. S and spd.; set 10¾-in. csg. 170 ft.; S.O. 1,500 ft.; T. Trenton L. 1,600 ft.; tstd. sulf wtr. 2,793-97 ft.; ran csg. to 2,795 ft. and shut off sulfur wtr.; bailed S.O. and some gas; drlg. L. 3,310 ft.

Leflore County

Exchange Oil Co.'s No. 1 Wildwood, SE SE NE Sec. 6-20n-1e. Drlg. 593 ft.

Madison County

Ralph A. Johnston's No. 1 J. W. Locke School Land, NE NE Sec. 16-11n-3e. Loc.

Ralph A. Johnston's No. 1 F. H. Ray, C SE SW Sec. 6-8n-3e. Drlg. sh. 4,557 ft.

Monroe County

Willmut Gas & Oil Co.'s No. 1 Rye, 300 ft. N and E C Sec. 22-15n-17e. Set 10¾-in. csg. 625 ft.; drlg. hd. sdy. L. 899 ft.

Scott County

Exchange Oil Co.'s No. 1 Newell, Mineral Lease Co., Inc., 330 ft. NW cor. NE SW Sec. 30-7n-7e. Drlg. rd. sh. 6,110 ft.

Smith County

Haynes B. Owenby Drlg. Co.'s No. 1 State, C SE NE Sec. 6-2n-9e. Set 10¾-in. csg. 510 ft.; cg. 5,871 ft.

Tallahatchie County

Gulf Ref. Co.'s No. 1 Cason, C NE Sec. 2-21n-2w. Set 13⅜-in. csg. 153 ft.; drlg. 4,576 ft.

Warren County

H. C. Cummings et al's No. 1 T. H. Morrissey, C E½ W½ NE Sec. 8-17n-2e. T.D. 5,774 ft.; hole bridged 1,250 ft.; sdtrkd. and drld. back in old hole 3,000 ft.; drlg. sh. 5,917 ft.

Yalobusha County

J. E. Green's No. 1 Walter-Goldman, 247 ft. SW cor., SE NW Sec. 23-25n-6e. Drlg. 475 ft.; cd. sds. 260-320 ft. and 400-68 ft.; drlg. sh. 893 ft.

Stewart Oil Co.'s No. 1 R. H. Creekmore, C SW NE Sec. 21-24n-7e. O.W.D.D.; O.T.D. 3,188 ft.; S.D.

Yazoo County

Leon Dunn's No. 2 H. H. Pepper, 1224 ft. E, 990 ft. S NW cor. Sec. 26-12n-2e. M.I.M.

Exchange Oil Co.'s No. 1 T. A. Bennett, SW SW SE Sec. 28-12n-2e. Loc.

Exchange Oil Co.'s No. 3 Wilburn, SW NE NE Sec. 31-12n-3e. M.I.M.

Hassie Hunt's No. 4 A. G. Johnson, C NE NW Sec. 14-10-3. Set 10¾-in. csg. 617 ft.; W.O.C. 1,295 ft.

Hill & Hill's No. 1 W. A. Montgomery, C SE SW SE Sec. 24-12n-2e. Set 10¾-in. csg. 920 ft.; drlg. 2,821 ft.

Sells Pet. Co.'s No. 1 Falkner, C SE NE Sec. 34-9n-4w. Set csg. 1,640 ft.; drlg. 3,553 ft.

Slick-Urschel Oil Co.'s No. 6 T. B. Slick, SW cor. SE Sec. 35-10-3. Woodruff sd. 4,800-17 ft.; set 7-in. csg.; W.O.C.; T.D. 4,817 ft.

C. L. Thompson, Rowan & Hope's No. 1 Joe Elliott-Mrs. Mary Edwards, 900 ft. S. 2,310 ft. W of NE cor. Sec. 30-10n-3w. Spdg.

Union Prod. Co.'s No. 11 Stevens, 1,040 ft. SW cor. Sec. 12-10-3. Set 16-in. csg. 57 ft.; W.O.C.

Union Prod. Co.'s No. 16 J. Stevens, C NE NE Sec. 12-10-3. Set 10¾-in. csg. 613 ft. Drlg. sh. and bldrs. 4,528 ft.

Union Prod. Co.'s No. 3 Twiner, C NW NW Sec. 1-10-3. Set 10¾-in. csg. 600 ft.; T.D. 4,937 ft.; Woodruff sd. 4,874-4,902 ft.; set 7-in. csg. 4,868 ft.; swbg. in plts.

Union Prod. Co.'s No. 7 Woodruff, C SE SE 13-10-3. Set 10¾-in. csg. 602 ft.; T.D. 4,261 ft.; O. sd. 4,849 ft.; D.S. tested mud, oil and fresh wtr.; cg. 4,923 ft.

Whigate Oil Co.'s No. 2 Robertson, S½ NW SE Sec. 20-10-3. Drlg. sh. 3,921 ft.

ALABAMA

Choctaw County

Union Prod. Co.'s (formerly Joe Modisett et al) No. 1 McCorvey, SE cor. SW SW Sec. 20-9n-2w. O.W.D.D.; O.T.D. 7,520 ft.; reamed to bttm.; recmtd.; T. surf. csg.; T.D. 9,622 ft.; drlg..; attempting to get back in old hole.

Green County

L. M. Glasco's (formerly E. C. Johnson's) No. 1 Willis, SW Sec. 11-20n-1e. Set 10 ft. surf. csg.; S.D. 45 ft.

Lawrence County

D. V. Mann et al's No. 1 Jackson, NE NE Sec. 30-7s-6w. Set surf. csg.; drlg. 100 ft.

Marion County

Seaboard Oil Co.'s No. 1 Clark et al., 360 ft. W, 660 ft. N, SE cor. SE SW Sec. 28-11s-14w. Shot 638-45 ft. with 130 qt. nitroglycerin; crooked hole; skdg. over.

Mobile County

W. L. McClanahan's No. 1 J. A. Stafford 300 ft. N, 150 ft. W SE cor. NW SW Sec. 24-7s-3w. Set 10-in. csg. 750 ft.; reported S.G. 3,475-90 ft. and S.O. 4,550-72 ft.; ran electrical log 5,590 ft.; drlg. sh. and hd. L 6,179 ft.

Plains Prod. Co.'s No. 1 Daly-Hardman, NW cor. SE SE Sec. 2-6s-4w. Drk.

FLORIDA

Suwannee County

Wm. G. Blanchard et al's No. 1 Lucy Cotton, 774 ft. N, 153 ft. W, SE cor. NE¼ Sec. 35-3s-11e. S.D. 184 ft.

J. W. Phillips Oil Expltn. Co.'s No. 1 Chilkett, NW NW Sec. 14-4s-14e. S.D. cor. T.D. 369 ft.

GEORGIA

Clinch County

Georgia Resources, Inc.'s No. 1 Gillican C Land Lot 200, 12th Land Dist. Set 10-in. csg. 736 ft.; slight odor oil 1,025 ft.; cg. 1,375 ft.

Georgia Resources, Inc.'s No. 1 Dickerson, Land Lot 273, Land Dist. 12 Lost hole 350 ft.; moved off and spdg. new hole.

Montgomery County

E. O. Meadows' No. 3 Moses, SW R.R. station, Uvalda Sur. Set 8-in. 1,880 ft.; reported traces O.&G. 1,755-1,829 ft.

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Muck on the derrick floor is eliminated by using Patterson-Ballagh Pipe Wipers. They strip the oil and mud off the pipe and tubing. Wash water is not used. Mud is not diluted and "channeling" does not take place. ¶ This device covers the hole and reduces fishing jobs by preventing broken tong dies, etc., from dropping in. A flat metal disc reinforces the rim, but is entirely enclosed in rubber, making every P-B Pipe Wiper absolutely spark-proof. A flexible web has a hole slightly smaller than the O.D. of the pipe, permitting the Wiper to hug the pipe and also to let the Protectors, tool joints and couplings pass through.

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Patterson-Ballagh ...PIPE WIPERS

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1940 High	1940 Low	Week ended June 1 High	Week ended June 1 Low	Week ended June 1 Close	Stocks	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1939	Com. sh. earn. 1938	Com. sh. earn. 1937	1939 High	1939 Low	1938 High	1938 Low
58½	38½	40½	38½	40	Amerada Corp.	788,675	N.P.	50cQ	4-30-40	$2.00	$2.07	$3.04	74½	50	78	55
27⅛	18¼	21⅞	20	20⅛	Atlantic Refining	2,663,999	$25	25cQ	6-15-40	1.00	1.40	3.51	24¾	18⅛	27⅝	17⅝
16⅝	8½	10¼	9⅛	9⅝	Barber Asphalt Co.	390,223	$10	25c	5-21-40	.25	—.85	1.91	21	10¼	23¾	12⅛
13⅜	7⅜	8⅜	7½	7¾	Barnsdall Oil Co.	2,558,779	$5	15c	6-8-40	.90	1.26	.85	19½	11⅛	21⅜	10⅛
8⅛	5½	6¼	5⅝	6¼	Consolidated Oil Corp.	13,751,726	N.P.	20cQ	5-15-40	.80	.55	1.48	9⅞	6½	10⅜	7
25	16¾	19⅝	18	18⅝	Continental Oil of Delaware	4,682,572	$5	25cQ	3-25-40	1.00	1.10	2.98	31½	19⅞	35⅝	21¼
6⅞	3⅜	4	3½	4	Houston Oil	1,098,618	$25	....	10-17-30	....	.83	.94	9⅜	4½	9⅜	5
14⅜	9	9⅜	9	9	Lion Oil Refining	435,815	N.P.	25cQ	4-20-40	1.00	2.09	2.17	18⅛	10	25⅛	15⅝
17⅜	11½	13	11⅝	12¾	Mid-Continent Petroleum	1,857,912	$10	40c	6-1-40	.60	.56	2.86	18	11⅛	22⅝	12¼
11	7⅛	8¼	7½	7½	Mission Corporation	1,378,645	$10	40c	12-15-39	.65	1.04	1.31	14⅞	8⅜	17⅜	10⅝
9¾	4⅝	5⅝	4¾	5⅝	National Supply	1,155,517	$10	....	12-22-37	....	—.79	4.90	15½	5⅝	23	12½
8¾	5¾	6⅜	5¾	6	Ohio Oil Co.	6,563,377	N.P.	20c	6-15-40	....	.25	1.30	10½	6	14⅞	8⅞
8⅛	5⅞	5⅞	5⅞	5⅞	Pacific Western Oil	1,000,000	N.P.	40c	12-19-39	.40	1.22	1.39	11⅞	7	15⅞	10¼
8½	6¾	7	6¾	7	Pan American Pet. Trans.	4,702,945	$5	....	12-31-37	....	.08	1.18	8¾	5	9¼	6¼
41¾	27⅛	31	28	30	Phillips Petroleum	4,449,052	N.P.	50cQ	6-1-40	2.00	2.03	5.42	46½	31¼	44⅜	27¼
22¾	15	16½	15	16	Plymouth Oil Co.	1,038,633	$5	35cQ	3-30-40	§1.40	2.59	2.85	24	17⅛	25⅜	15
11½	7	7⅞	7	7¾	Pure Oil Co.	3,982,031	N.P.	25c	12-20-39	.25	.38	2.15	11¾	6⅛	13½	8¼
8⅜	5⅞	6⅜	6⅛	6⅜	Richfield Oil Corp.	4,010,000	N.P.	50c	12-18-39	.50	.51	.35	10¼	6⅜	9⅞	5
20	11	14	12½	12⅝	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-40	1.00	1.52	1.97	24⅜	15½	27½	15⅛
13⅛	8	8⅜	8	8	Shell Union Oil	13,070,625	N.P.	25c	12-20-39	.50	.72	1.44	17¼	9⅞	18⅜	10
23¼	13	14¼	13⅜	13½	Skelly Oil	995,349	$15	25c	1-30-40	.75	2.27	6.07	29½	15½	34⅜	18½
12½	7⅛	8½	7¾	7⅞	Socony-Vacuum	31,206,071	$15	25cSA	3-15-40	.50	1.29	1.82	15⅛	10¼	16⅜	10⅜
26⅛	17⅜	19⅜	17⅝	18	Standard Oil of California	13,003,953	N.P.	25cQ	3-15-40	1.10	2.22	3.17	33⅝	24¼	34⅞	25⅛
29	20⅜	21⅜	20⅜	21⅛	Standard Oil (Indiana)	15,272,020	$25	25c	6-15-40	1.25	1.82	3.66	30	22⅜	35½	24⅜
46½	30	33	29⅞	30	Standard Oil of New Jersey	27,280,998	$25	1.00†	6-15-40	1.25	2.86	5.64	53½	38	58⅜	39⅜
65⅞	47	50	47¼	49	Sun Oil	2,434,863	N.P.	25c*	6-15-40	1.00	1.07	3.86	66	45⅜	65⅛	45
2½	1¼	1½	1¼	1½	Superior Oil Corp.	1,388,979	$1	10c	12-28-38	....	.24	.32	3⅝	1⅜	4¼	1⅜
47⅝	33	35¾	33	35	Texas Corp.	10,876,139	$25	50cQ	4-1-40	2.00	2.13	5.02	50¾	32½	49⅝	32⅝
4¼	2½	2⅞	2⅝	2⅝	Texas Gulf Producing Co.	888,146	N.P.	10c	6-15-40	.20	.86	.68	5¾	3¼	5⅞	2⅝
8⅝	5½	6	5½	6	Texas Pacific Coal & Oil	888,236	$10	10c	6-1-40	.40	1.16	1.11	11⅜	7	12½	7
12	8¾	9⅛	8¾	8¾	Tide Water Associated	6,371,827	$10	25c	6-1-40	.80	1.28	2.08	14¼	9½	15¾	10⅛
17½	12	12⅛	12	12	Union Oil Co. of California	4,666,270	$25	25c	5-10-40	1.05	1.47	2.58	19¾	15¼	22½	17⅛
29⅞	22¾	25	24⅛	25	Union Tank Car Co.	1,177,381	N.P.	45c	6-1-40	1.30	1.16	1.70	24¼	20⅛	23½	20
3⅝	1⅞	2⅛	2	2⅛	Wilcox Oil & Gas	470,768	$5	10c	2-15-40	....	.52	.24	4¼	2⅜	3½	1⅝

*Also 5 per cent in stock. †Includes extras. ‡Also 2 per cent in stock. §Also 4 per cent in stock. ‖Also 2½ per cent in stock. ¶Also 1⅛ per cent in stock. —Deficit.

New York Curb Exchange

1940 High	1940 Low	Week ended June 1 High	Week ended June 1 Low	Week ended June 1 Close	Stocks	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1939	Com. sh. earn. 1938	Com. sh. earn. 1937	1939 High	1939 Low	1938 High	1938 Low
10¾	5	6	5½	5⅝	American Republics Corp.	1,308,049	$10	10c	7-11-38	....	—$0.22	$0.27	11¾	5½	11⅜	5
3¼	1⅜	1⅝	1½	1½	Bridgeport Machine Co.	270,000	N.P.	$1.25	12-30-37	....	—.14	1.90	7¼	2½	10¼	4⅜
43	28	33½	31	33½	Buckeye Pipe Line Co.	200,000	$50	$1	6-15-40	$2.50	2.36	4.02	34¾	26½	39	22½
117	95	100	95	99	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-24-40	6.00	5.32	6.73	130	108¾	128	97
6⅜	4	4⅞	4½	4¾	Cities Service (new)	3,704,067	$10	....	6-1-32	....	.23	1.02	9¼	4¼	11	5⅛
2⅛	1⅛	1⅜	1¼	1⅜	Cosden Petroleum	462,551	$1	....	.....	....	....	.19	2¼	½	2⅜	⅜
24¼	14¾	16	14¾	15½	Creole Petroleum	6,975,383	$5	50cSA†	6-15-40	1.00	1.64	1.61	28	16¾	27½	17½
4⅜	2⅜	3	2⅞	3	Darby Petroleum	351,390	$5	25cSA	1-15-39	.25	....	1.36	7⅛	3⅝	10¼	5½
2	1¼	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	....	—.91	1.34	2⅝	1½	3½	1½
31	23½	..	..	..	Eureka Pipe Line	50,000	$50	75c	5-1-40	2.00	—.37	—.12	23	15⅛	31	16
39⅞	25⅜	28¼	25⅜	26¼	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-40	2.00	1.43	3.51	45⅛	29¼	46⅞	33
68	47⅛	57	48¼	50	Humble Oil & Refining	8,987,840	N.P.	62½c	7-1-40	2.00	3.98	5.22	71	52½	72⅝	56
12⅜	5⅝	7¼	6	6½	Imperial Oil of Canada	26,965,078	N.P.	37½c†	6-1-40	1.00	.96	.98	17	11⅝	19½	14⅛
7¾	5¾	6½	6½	6½	Indiana Pipe Line	300,000	$10	10c	5-15-40	.50	.47	1.03	7¼	5½	9⅝	6
19¾	9¾	11¼	9¾	9¾	International Petroleum	14,324,088	N.P.	75c	6-1-40	1.75	1.98	....	27½	17	31¼	21
2¾	2	2⅛	2	2	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	...	.14	.17	3¾	2⅛	5	2⅛
10¾	7⅝	8½	7¾	8¼	Lone Star Gas	5,553,747	N.P.	20c	4-22-40	.70	.88	1.14	10½	7⅛	10⅝	6⅝
6¼	3⅝	4½	4⅛	4⅛	Louisiana Land & Exp.	2,977,449	$1	10c	6-15-40	.35	.45	.58	7⅝	4	9⅝	6½
17	14½	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-40	1.00	2.28	3.26	17	14½	24	16
8½	6½	6⅞	6⅝	6⅝	Midwest Oil Co.	998,474	$10	45c	6-15-40	.90	.93	1.14	8¾	6⅝	9¾	6⅝
6¼	4⅞	5	4⅞	5	Mountain Producers	1,593,584	$10	30cSA	6-15-40	.60	.62	.76	6	4⅞	5¾	4½
13½	10¼	10⅞	10¼	10⅞	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-40	1.00	.84	.96	14	11¼	14⅝	11½
12½	8¾	9¾	9	9⅛	National Transit	509,000	$12.50	50c	6-15-40	.85	.88	1.19	9½	7¼	9¼	6½
1¼	1	..	..	..	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.02	.02	1⅝	1	2⅝	1½
7¾	5¼	..	..	..	New York Transit	100,000	$5	25c	4-15-40	.40	.16	.49	6	4	4½	3½
9⅞	6	7½	7½	7½	Northern Pipe Line	120,000	$10	40c	6-1-40	.30	.24	.78	7	4½	6	4
5½	2⅝	3⅛	2⅝	3	Pantepec Oil	2,857,000	$1	....	.....	....	....	....	7⅝	4	7⅝	3½
3¼	1½	1⅝	1⅝	1⅝	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.17	—.17	5	1¼	4½	1⅝
2½	1½	..	..	..	Ryan Consolidated	298,931	N.P.	....	.....	....	.29	.46	3	1⅞	4	2¼
11¾	4⅞	8	7¾	7¾	Southern Pipe Line	100,000	$10	15c	3-1-40	.30	—.27	.85	4⅛	3½	5⅝	3¼
44	28	30½	30	30½	South Penn Oil	1,000,000	$25	37½c	6-28-40	3.00	1.44	4.64	40½	26¾	39	28¾
35	22	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$5	4-1-40	2.00	—.41	.95	23	18	22¼	16½
20⅞	16½	17⅜	16⅝	17	Standard Oil of Kentucky	2,604,790	$10	25c	6-15-40	1.30	1.45	1.60	20⅛	17¼	18⅝	15
41⅜	26¼	29¾	27	29¾	Standard Oil of Ohio	753,740	$25	25c	6-15-40	1.50	1.81	3.67	32⅜	17	22⅜	16¼
2	1½	1⅝	1½	1⅝	Sunray Oil	2,007,076	$1	5c	5-1-40	.10	.23	.42	2⅜	1⅜	3¼	2
2⅜	2	2½	2½	2½	Texon Oil & Land	936,024	$2	10c	3-29-40	.10	.56	.51	4	2⅜	5¼	3⅛
3⅜	2	..	..	..	Transwestern Oil Co.	750,000	$10	.....	.....	....	—.12	.48	6	2½	7⅝	4¼
2⅛	1⅛	1⅛	1	1	United Gas Corp.	7,818,959	$1	....	.....	....	—.51	.25	3⅜	1⅛	5¼	2⅝

†Includes extras. —Deficit.

Personal Paragraphs

WILLIAM GRANTHAM, who has been dispatcher in the main office of General Petroleum Corp., has been appointed plant superintendent of the company's Vernon pipe-line station.

Z. MATSUMURA, president, and I. TANAKO, of Maruzen Oil Co., Osaka, and HIDEO KAWAMURE, Department of Commerce and Industry of the Japanese Government, Tokyo, visited Tulsa and Ponca City, Okla., last week. Acting as guides and interpreters during their trip through the United States were I. TERAO, Mitsubishi Steamship Co., San Francisco, Calif., and K. MURAYAMA, Azano Bussan Co., New York. The party left on a tour of the Gulf Coast and the Atlantic seaboard before returning to Japan.

CLIFFORD A. BROOKS, with the Shell Oil Co., Inc., in Texas, has been appointed exploitation engineer for the company.

BOB GUTRU, geologist with Cities Service Oil Co., has been transferred from the Gulf Coast division to Wichita, Kans.

RHEA CLARK, formerly in the Kilgore, Tex., office of the Texas Railroad Commission, has been transferred to the West Texas district office at Midland.

H. L. HAAG of Midland, Tex., has been appointed assistant chief scout for Shell Oil Co., Inc., at Houston, Tex. Mr. Haag succeeds BART JONES who has been transferred to the land department.

W. E. SIMPSON, of New York, in the marine department of Socony-Vacuum Oil Co., Inc., has been appointed to the A.P.I. central committee on tanker and barge transportation of petroleum.

B. N. MOORE, of New York, has been assigned to duties at Port-au-Prince, Haiti, by the Atlantic Refining Co. geological department. Mr. Moore was formerly geologist for Caracas Petroleum Co., which is active in Venezuelan exploration.

GOV. JOHN E. MILES of New Mexico, who was in Fort Worth, Tex., the past week attending the A.P.I. meetings, was honored at a barbecue by ARCH ROWAN, Rowan & Nichols Oil Co., Fort Worth, at his country home west of the city. The guest list included 50 oil men and their wives.

R. P. HIGGINS, of Western Gulf Oil Co., has been elected chairman of the administrative body of the Central Committee of California Oil Producers, official curtailment group in California. Other members of the administrative group are LAURENCE KELLY, E. E. PYLES, R. D. MONTGOMERY, AND H. S. STARK.

ROBERT T. COLLIER, who recently resigned as assistant general sales manager of Shell Oil Co., Inc., has been appointed vice president in charge of Pacific Coast sales of the Great Lakes Carbon Corp. and will make his headquarters in Long Beach where the company is constructing a new calcining and storage plant as well as marine facilities.

DR. ED BLOESCH, geologist, has returned to Tulsa from the Forest City basin, where he has been actively engaged.

E. J. GALT, independent operator, formerly of Ardmore, Okla., has announced the transfer of his offices from that city to San Antonio, Tex., where he will be located in the Milam Building.

PAT M. BROACH, Kansas scout for the Stanolind companies, was transferred to Houston, Tex., June 1. He was succeeded at Wichita by W. L. McGEE, who has been representing Stanolind in the Oklahoma City, Okla., area.

EDWARD NELSON, chief engineer of Northwestern Utilities, Ltd., of Edmonton, Alta., was elected chairman of the Engineering Institute of Canada at the recent annual meeting. Other officers are: Vice chairman, R. M. HARDY; secretary-treasurer, BARCLAY W. PITFIELD; directors, A. ALLAN, H. R. WEBB, J. F. McDOUGALL, C. W. CARRY, T. D. STANLEY, P. M. SAUDER, CHARLES E. GARNETT, W. R. MOUNT.

L. A. BOYD, since 1934 superintendent of the Gas & Oil Products refinery at Turner Valley, Alberta, is leaving to accept a position at Tulsa. His place is being taken by the assistant superintendent, W. NEILSON. Prior to his departure, Mr. Boyd was presented with a case of silverware by the refinery staff.

JOHN KELLY, petroleum engineer of Hobbs, N. M., is engineer with the Lea County Operators Committee.

J. W. PEVEY, independent operator of Tyler, Tex., opened the official summer fishing season at Corpus Christi, Tex., last week.

HENRY J. PIERCE, of London, England, has gone to Lisbon, Portugal, for the Anglo-Portuguese Oil Co., Ltd., of which he is a director.

FRANK S. MILLARD has gone to Barcelona, Venezuela, where he will be engaged in electrical-coring work for the Mene Grande Oil Co.

RALPH CLARE GRAHAM, petroleum engineer, with the Security Engineering Co., has been transferred from Whittier, Calif., to Houston, Tex.

R. M. HUTCHINSON, chief engineer of the Houston Natural Gas Co., Houston, Tex., was elected president of the Houston Engineers Club the past week.

J. T. ANDERSON, president of the Best Oil Co., Los Angeles, Calif., is in Abilene, Tex., arranging for the spudding of an outpost test to the recently discovered Tripplett field of Jones County.

T. E. SWIGART, vice president of Shell Oil Co., Inc., Houston, Tex., was elected chairman of the board of the Houston Symphony Orchestra. Other oil men elected as officers were: H. R. CULLEN, president of the Quintana Petroleum Corp.; H. C. WEISS, president of Humble Oil & Refining Co., and JOHN E. GREEN, general counsel, Gulf Oil Corp.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Cushing field in Oklahoma, which was producing over 300,000 bbl. per day 7 weeks ago, has fallen to 269,000 bbl. and it is predicted that it will fall to 200,000 bbl. by July 15. Stored oil in the Cushing field amounts to 35,822,509 bbl.

Gulf Refining Co. is building a large plant at Port Arthur, Tex., that will use the Dr. McDuff McAfee process for extracting gasoline and lubricants from crude oil.

20 YEARS AGO

Largest fields in California are Midway-Sunset with 91,982 bbl. a day, Whittier-Fullerton with 74,904 bbl. per day, and Coalinga with 45,093 bbl., and the three produce 76 per cent of the state's total daily output.

Oklahoma counties wtih the largest average daily crude production in April were Creek, with 53,160 bbl.; Osage, with 50,892 bbl.; Carter, with 48,269 bbl., and Okmulgee with 44,269 bbl. The total for the state was 287,505 bbl. Kansas produced 96,336 bbl. per day.

David White, of the U. S. Geological Survey, in a formal report says the United States faces probable exhaustion of its petroleum resources by 1939, "if present production and consumption are maintained." He estimates the world's resources of crude at 6,325,000,000 bbl.

10 YEARS AGO

The mystery of the ownership of the Ajax Pipe Line Co. has been dispelled. Standard Oil Co. of New Jersey and Standard Oil Co. of Ohio admit they are behind the project.

The subject of antiknock motor fuel, which is all Greek to motorists, is treated in popular language by an Oil and Gas Journal staff man.

Fifty-three Oklahoma City oil wells produce 134,459 bbl. per day, or an average of 2,537 bbl. per well per day.

F. N. BOSCO, petroleum engineer, who returned from Brazil recently, plans to stay in Denver, Colo., for a time.

WILLIAM N. BONNER, president of the Normandie Oil Co., Houston, Tex., left last week for a business and pleasure trip to New York.

SAMI N. NASR has been transferred from Iraq to Haifa, Palestine, where he is field geologist for Iraq Petroleum Co., Ltd.

M. B. ARICK has left Venezuela for the Dominican Republic, where he is exploration geologist for the Standard Oil Co. of Venezuela, with headquarters in Trujillo.

J. A. BOLLE, formerly with the Humble Oil & Refining Co., Houston, Tex., has left for Palembang, Sumatra, to accept a position with the Nederlandsche Koloniale Petroleum Mij.

JOSEPH CHALMERS, exploitation engineer for De Bataafsche Petroleum Mij. in The Hague, has returned to the United States and is with the Shell Oil Co., Inc., in St. Louis.

CHARLES J. M. van BERGEN, formerly on the Antwerp staff of Gulf Oil Corp., joined the export department of the Alliance Oil Corp. at New York before the Low Countries were invaded by Germany.

JOE E. BUTLER, independent operator of Corsicana, Tex., has accepted appointment as vice chairman of the oil-industry craft assembly at the convention of the Rotary International to be held in Havana, Cuba, June 9 to 13. He will head a delegation to sail from Houston late this week.

First in Ventura Field

To Thomas L. Wark, assistant vice president of the Tide Water Associated Oil Co., Associated Division, goes the distinction of having been the first petroleum engineer in the Ventura, California, field. That was in 1920, when he joined the old Associated Oil Co., this marking his entrance into the oil business. After 2 years he was sent to Colombia as a geologist on a roving mission. During the next 6 months he covered many areas of Colombia, searching for structures and geological formations for the accumulation of oil.

THOMAS L. WARK

Returning in 1923, Mr. Wark entered the general offices of Associated Oil in San Francisco as a geologist. He continued in that position 13 years. In 1936 he was advanced to his present post. Mr. Wark was born in Bruin, Pa., in 1894. Following high school he attended Stanford University, California, majoring in geology.

Besides seeing that his academic record was kept in good condition the young man found time for athletics, and he distinguished himself in both Rugby and American football. He was a member of Stanford's first varsity eleven when that school returned to the American game after an experiment with Rugby. Golf is definitely his hobby, almost to the exclusion of other forms of recreation.

Mr. Wark is a member of the Presidio Golf Club and shoots a low score. He is married and has one son.

V. DALE MARTIN, who is with the Richmond Petroleum Co. in Bogota, Colombia, has been spending his leave in the United States.

FRANK V. MARTINEK, vice president in charge of personnel for Standard Oil Co. of Indiana, Chicago, is the author of a recently published book, "Don Wilson of the Navy."

JOHN R. SUMAN, vice president and director of the Humble Oil & Refining Co., at Houston, Tex., was named chairman of the nineteenth annual Houston Community Chest campaign.

JIMMY THOMPSON, independent geologist of Amarillo, Tex., will leave this week with Mrs. Thompson for a vacation trip through the East. They plan to be at Wellesley, Mass., to attend the graduation of their daughter, Mary, from Wellesley. They will return by way of New York, Canada, and Chicago.

J. N. YOUMANS, assistant superintendent of the Sinclair Refining Co. plant at Coffeyville, Kans., 3 years, has been transferred to the company's Wellsville, N. Y., refinery in a similar capacity. Mr. Youmans, who has been with Sinclair and predecessor companies in various capacities the past 20 years, is en route east to his new position.

COL. ERNEST O. THOMPSON, member of the Texas Railroad Commission, who for a time was expected to run for Congress, has finally decided to enter the race for governor. He is the eighth candidate formally to file. JERRY SADLER, also railroad commissioner, had already filed for governor. Colonel Thompson was runner-up to Governor O'Daniel in the primary 2 years ago.

CARLTON BEAL, district chairman of the coastal district, and F. L. WADSWORTH, secretary of the same district of the A.I.M.E., have been presenting some of the best meetings of the California chapter. Members from southern California have been attending in a group at many meetings which are held in Ventura.

Shifts: ROY K. EGGELSON, superintendent, Three Rivers Refining Co., from Three Rivers, Tex., to Elgin, Tex.; SAM BILLINGS, geologist, E. A. Vaughey, Inc., from Houston, Tex., to Enid, Okla.; FRED W. BARTLETT, engineer, Socony-Vacuum Oil Co., Inc., from Greenwich, Conn., to New York City; WILLIAM L. RUSSELL, geologist, Michigan Devonian Petroleum Co., from Macomb, Ill., to Tulsa; HOMER C. MOORE, geologist, Texas Co., from West Frankfort, Ill., to Cadiz, Ohio; D. L. GARRISON, engineer, Pan American Production Co., from Bay City, Tex., to Lake Charles, La.; A. J. RODGERS, geologist, Skelly Oil Co., from Bethany, Mo., to Falls City, Neb.; R. N. DUNCAN, purchasing agent, Shell Oil Co., Inc., from Clayton, Mo., to St. Louis, Mo.; RALPH G. ATKINSON, engineer, Standard Oil Co. of Ohio, from Cleveland, Ohio, to Euclid, Ohio; H. I. JOHNSON, production superintendent, Bistate Oil Co., from Oilmont, Mont., to Ferdig, Mont.; W. G. SELBY, vice president, Selby Oil & Gas Co., from Sarasota, Fla., to Ennis, Mont.; W. C. BEAN, geologist, Shell Oil Co., from Tulsa to Wichita Falls, Tex.; H. A. FARLEY, president, Pawnee Oil Production Co., from Tulsa to Durant, Okla.

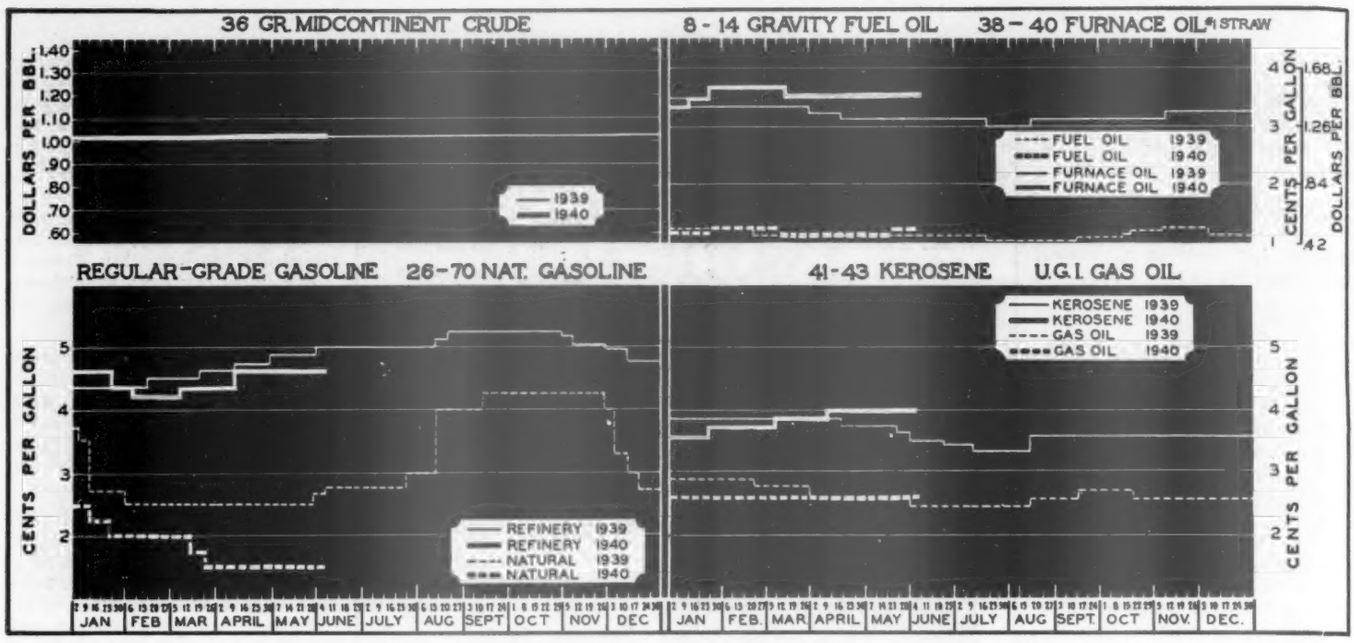
LAWRENCE E. BROCK, JR., junior petroleum engineer for Stanolind Oil & Gas Co., has been transferred from its Pampa, Tex., office to the division offices in Fort Worth. W. E. POWERS, formerly a roustabout in the Panhandle district for the company, has taken over Brock's duties at Pampa.

EDWIN E. HOPKINS, independent operator and geologist of Dallas, Tex., last Friday won the A.P.I. handicap golf tournament at the Colonial Golf Club in Fort Worth, Tex. By posting an 84 his net score was 66, he having had a handicap of 18. J. EARLE BROWN, consulting geologist of Fort Worth, was runnerup with an 83, which with a handicap of 15 gave him a net of 68. W. K. WARREN, president of Warren Petroleum Co., Tulsa, and A. N. MEADOWS, vice president of General American Oil Co., tied for third place with net scores of 71, playing under handicaps of 12 and 14, respectively.

RALPH E. FAIR, president of Ralph E. Fair, Inc., formerly of Dallas, Tex., has moved his offices and residence to San Antonio, Tex.

TED JUDD has returned from Hungary, where he served as superintendent during the construction of a crude-oil pipe line laid in the vicinity of Budapest. He is now employed by Latex Construction Co., at Houma, La.

DR. ROYD R. SAYERS, nominated to be director of the Bureau of Mines, has been confirmed by the Senate, and both House and Senate have approved a provision of the Interior Department appropriation bill authorizing Dr. Sayers to hold this office without the loss of his status as a commissioned officer of the U. S. Public Health Service. Dr. Sayers has been serving as acting director of the bureau on leave of absence from the Health Service and he declined to accept permanent appointment without assurance he could retain his status as a career man and return to the Health Service later if he so desires. Dr. Sayers has been in charge of the office of industrial hygiene and sanitation of the Health Service and from 1917 to 1933 he was chief of the health and safety branch of the Bureau of Mines on detail from the Health Service.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Group 3 Gasoline Market Exhibiting Modest Signs of Recuperation

By T. F. SMILEY

ALTHOUGH quotations moved along at the same old depressed levels, the Group 3 gasoline market showed faint signs of recuperation this week. Heavy industrial fuel too was looking up a little. The other petroleum products stirred but slightly from the positions they occupied last week.

Jobber buying of gasoline was expected to be stimulated by the announcement that a half cent probably would be added to the federal tax July 1 as a means of meeting part of the expense involved in the administration's defense program. All gasoline bought before the higher tax goes into effect will be subject to the present tax of 1 cent of course; but as prices will go up automatically with the half-cent raise, the jobber who buys before the tax advance and sells after it will harvest a half-cent extra profit. Neither the refiner nor the integrated oil company can benefit through the tax increase, the latter because ownership of the gasoline it makes does not change till it is sold to the consumer at the service station.

Export Business in Sight

News that several boats were scheduled to arrive under convoy at Gulf Coast ports during the first 10 days of June, for loading with crude and refinery products, created a flutter of interest. It is taken for granted that a large part of the export shipment will be gasoline, though refiners said they had no intimation of what the proportion would be.

The dwindling seriousness of the threat which the Illinois field has presented to Group 3 refiners for about 3 years is not without its cheering influence. Some of the refiners close to that field who operated on underpriced crude are unable now to buy for less than posted prices, with the result that their advantage over Oklahoma competitors is reduced or removed altogether.

Orders for gasoline were coming in at a sharply better rate, sales managers said, as jobbers prepared for the heavier consumption that always attends the closing of schools and the beginning of the vacation season. Many rush orders were to replenish stocks depleted by the Memorial Day demand. Although nobody was optimistic about tank-car prices, there was general agreement that demand would rise steadily.

Refined Oil Market Barometer

Weakness of the gasoline market becomes more apparent as rising gallonage fails to move tank-car prices from their abnormally low levels. Expected half-cent addition to federal tax should stimulate jobber buying temporarily. Position of heavy fuels is improving under influence of railroad and industrial demand. Lubricating oils unsettled as result of erratic export market.

MID-CONTINENT. Gasoline weak. Wax off. Lubricating oils easier. Heavy fuel steadier.

EAST COAST. Gasoline dull. Kerosene holding well. Wax losing ground. Light fuels soft.

GULF COAST. Problem of excessive gasoline stocks increasingly acute. Fuel oils weaker.

PENNSYLVANIA. Bright and cylinder stocks soft. Neutrals better. Wax off. Gasoline weak.

CALIFORNIA. Motor fuel and natural gasoline weak and prices lower. Kerosene declines.

CHICAGO. Gasoline demand rising, but quotations unchanged. Heavy fuel stronger.

Buyers reported difficulty in getting a good 60-62-octane 400-end point motor fuel, for which they said there was substantial demand. Much of the third-grade material in the market was a blend of natural gasoline and naphtha.

Although there seemed to be no really distress stocks of natural gasoline in Oklahoma, buying was less active than it was last week. There was no improvement in the Texas situation, so manufacturers in both states continued to face a cheerless market. It was believed the prospective export business early this month would afford a bit of relief to congested natural-gasoline storage at the Gulf. Large quantities in tanks there have already been sold to refiners, but the worried refiners have been unable to accept delivery.

Lubricant Market Erratic

Lubricating oils were experiencing an erratic market, export trade being extremely unsettled. Lubricant manufacturers concede that if they had refrained from increasing their output last fall and had withdrawn from swollen inventories instead, their market would be in a healthy condition now. A rush of oversea business, it will be recalled, prompted refiners to step up production. They made lubricating oils not only to fill current orders, but orders that never came, with the result that eastern plants especially accumulated stocks that still remain to plague their owners. Wax, subject of an uncertain export market, was off an eighth.

Buying of heating oils for storage was supporting that division of the market. All grades were somewhat easier than last week, but offerings were not overplentiful, and No. 2 straw was particularly steady. Tractor fuels were moving in fair volume.

Export Situation Yet Confused As Rumors Lack Confirmation

By H. STANLEY NORMAN

NEW YORK, June 4.—Export conditions remain unchanged in this area although the French Navy inquiry for approximately 1,750,000 bbl. of fuel oil of slightly higher than Bunker C specifications remains in the market. The two cargoes of motor fuel for the French buying commission have been placed in the Netherland West Indies for June and July loading, it was reported in New York last week, removing this potential business from the hands of United States refiners.

Reports were circulated that inquiries remain in the hands of refiners for three or four additional cargoes of motor fuel but confirmation could not be obtained from the leading exporters. Failure to obtain confirmation gave rise to the thought that duplication of the two cargoes for France may be figuring in rumors.

The break in kerosene, distillate and residual-fuel-oil prices 2 weeks ago has been extended to quotations of practically all suppliers. Socony-Vacuum Oil Co., Inc., lowered No. 2 fuel-oil tank-car prices in New York to 4.7 cents per gallon early last week which is a half point below the quotation previously posted by Standard Oil Co. of New Jersey which set the pace in reducing fuel-oil prices throughout the eastern seaboard territory. Barge customers can obtain No. 2 fuel oil in the New York market at a range of 4.6 to 4.7 cents per gallon at the docks. There is very little current movement of distillate fuel oil from the Gulf Coast to the terminals of independent distributors in the Northeast because of the ability to purchase here at more profitable figures.

Tanker rates have been maintained by the spot charters at a range of 58 to 62 cents per barrel, depending on the cargo classification. Boat owners, generally, are asking 62 cents per barrel for coastwise movement of cargoes of light fuel oil making the transportation cost alone from the Gulf to North Atlantic ports approximately 1.24 cents per gallon. Gulf refiners are quoting No. 2 fuel oil at 3.5 cents which added to the tanker-charter cost makes the laid-down cost in New York about nine-tenths of a cent higher than the barge and tank-car quotation by eastern refiners.

There has been no change in the northeastern section in the tank-car and barge quotation on motor fuel. There have been slight adjustments in the New England and western New York tank-wagon quotations to conform to competitive conditions and to bring some of the excluded points into line with the general reduction announced in this section 2 weeks ago. The tank-car market for 72-74-octane (A.S.T.M.) gasoline in New York ranges from 6.25 to 6.7 cents per gallon with barge deliveries available at 6.0 to 6.5 cents. Sellers are willing to accept 6 cents for low-octane motor fuel in tank cars and this price can be shaded slightly in some directions if delivery in barges is acceptable.

Tank-car sellers of kerosene are currently asking from 5.5 to 6 cents, compared to a top of 6.5 cents before the general fuel-oil reduction in the third week of May. The demand for kerosene is reported holding up reasonably well. The use of space heaters in this area and more northeastern sections is still quite general because of the cool and damp weather conditions. Western Pennsylvania refiners continue to quote from 5 to 5.25 cents per gallon for kerosene in tank cars and report the movement fairly brisk.

A buyer was reported attempting to locate a cargo of kerosene on the Gulf Coast at a price of 4.125 cents per gallon, but up to the end of the week no supplier had appeared to fill the inquiry at that figure. Gulf refiners are generally quoting a low of 4.25 cents per gallon for kerosene and others are holding this material at 4.5 to 4.625 cents per gallon. There appears to be no particular anxiety to move kerosene if a price concession is involved.

The low side of the scale-wax market was further depressed last week, but suppliers vary rather widely in their market opinions. Some suppliers were reported willing to sell white crude scale wax at a low of 4.375 cents per pound, but there were fully as many, if not more, who expressed disinterest in moving out material at less than the previously prevailing figure of 4.75 cents.

Lubricating oils, gasoline and fuel oils from the western Pennsylvania refining district held their market positions despite a reduction of 25 cents per barrel in crude postings on May 22. Previous reductions in the lubricating-oil market had more than absorbed the margin by which raw-material costs were reduced. There is still no evidence of change in the lubricating-oil export picture which refiners say is needed to support the satisfactory domestic demand if a stronger market position is to be attained. Purchases by normally active customers in the Low Countries and Scandinavia have been completely halted since the spread of the European war and demand by the Allied powers has fallen short of making up the deficit. Normally, Belgium, the Netherlands, Denmark, Norway, and Sweden are substantial purchasers of Pennsylvania and other American made lubricating oils.

In the face of absence of inquiries from abroad refiners are compelled to regard this outlet as strictly an unknown quantity. With motor-fuel stocks remaining around 100,000,000 bbl., the industry is confident of its position to supply any unforeseen increase in export demand, but there is a growing feeling that operations will have to be paced more in keeping with the predictable domestic conditions if the summer market is to yield the desired results.

Gulf Coast Markets

HOUSTON, Tex., June 4.—Reports that agents of one of the Allied governments of Europe had made inquiries for gasoline made the rounds of Gulf refinery market circles the past week, but like all previous such reports they either were unfounded, or else grossly exaggerated. No one, so far as could be learned, could lay their hands definitely on the sources, nor the recipients of the inquiries.

To the contrary, there still was no relief immediately in sight for the tightly pressing gasoline-storage situation. While there was no indication of any move to reduce existing quotations, it was felt that several sources of supply might be more in the mood than ever before to accept almost any offer if material could be moved.

It is understood that there are several important independent refiners with overflowing storage who would prefer to take substantial losses on gasoline on hand rather than make any curtailment of operations that might force them to give up any of their crude connections now might cause them to lose these sources of crude supply permanently and place them in an embarrassing situation later should they happen to need crude.

The situation is reported becoming particularly acute in the Corpus Christi area, where gasoline stocks are extra excessive considering the size of the companies holding them.

Particular interest, however, has been directed to the heavy movement

(Continued on Page 111)

A. P. I. Weekly Refinery Statistics

Week Ended June 1, 1940

	Capacity reporting (per cent)	Total gasoline stocks (bbl.)	Residual fuel-oil stocks (bbl.)	Gas oil and distillate stocks (bbl.)	Daily crude runs (bbl.)
East Coast	100.0	23,603,000	8,646,000	7,615,000	585,000
Appalachian	91.0	3,862,000	644,000	342,000	115,000
Ind., Ill., and Ky.	89.5	17,586,000	3,345,000	3,069,000	556,000
Okla., Kans., and Mo.	76.9	8,050,000	1,962,000	1,134,000	285,000
Inland Texas	59.6	2,016,000	1,514,000	288,000	117,000
Texas Gulf	85.3	14,847,000	5,362,000	4,308,000	878,000
Louisiana Gulf	97.6	2,883,000	834,000	1,028,000	128,000
N. Louisiana and Ark.	51.5	556,000	468,000	238,000	38,000
Rocky Mountains	55.5	1,639,000	626,000	142,000	59,000
California	87.3	18,251,000	79,152,000	9,974,000	514,000
Total reported	85.1	93,293,000	102,553,000	28,138,000	3,275,000
Est. unreported	.....	7,060,000	2,215,000	1,395,000	375,000
*Est. total	.....	100,353,000	104,768,000	29,533,000	3,650,000
*Est. total previous wk.	.....	100,297,000	104,015,000	28,356,000	3,580,000
*June 2, 1939	.....	84,200,000	111,236,000	27,813,000	3,415,000

*Bureau of Mines.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ended May 25, 1940	259,330,000	barrels
Week ended May 18, 1940	257,647,000	barrels
Week ended May 27, 1939	278,289,000	barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of June 4, 1940

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline: Tank wag.	Gasoline: Dlr.	Gasoline: Incl. tax	Kero. tank wag.
Chicago, Ill.	15.1	13.1	4.0	10.0
Decatur	13.6	12.1	4.0	9.5
Joliet	15.1	13.6	4.0	10.0
Peoria	15.1	12.7	4.0	10.0
Quincy	14.9	13.4	4.0	9.8
Davenport, Ia.	15.1	13.6	4.0	‡10.0
Des Moines	14.9	12.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	10.4
Minneapolis	16.5	14.5	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.4	5.0	10.3
Milwaukee	16.3	14.8	5.0	10.2
Detroit, Mich.	13.6	12.1	4.0	7.6
Grand Rapids	13.2	11.7	4.0	9.0
Saginaw	14.2	12.7	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	14.3	5.0	†10.2
South Bend	16.8	15.3	5.0	†10.2
Fargo, N. D.	17.7	16.2	5.0	11.6
Huron, S. D.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.9	4.0	8.0
St. Louis*	14.7	12.7	4.0	8.0
St. Joseph	14.4	12.0	4.0	7.9
Wichita, Kans.	13.3	11.6	4.0	7.0

*State tax 2 cents, 1-cent city tax, and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes. Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gal. or more, 1.5 cents off; minimum delivery 25 gal.

Stanolex Fuel Oil in Chicago

Effective April 18, 1940, f.o.b. Chicago, tank-wagon prices: Standard heater oil, 1-99 gal., 8.75 cents; 100-149 gal., 7.75 cents; 150 gal. and over, 7.25 cents. Stanolex fuel oil No. 1, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7 cents; 400 gal. and over, 6.5 cents. Stanolex furnace oil, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7 cents; 400 gal. and over, 6.5 cents. Stanolex fuel oil A, 1-399 gal., 5.5 cents; 400-799 gal., 4.5 cents; 800 gal. and over, 4.25 cents. Stanolex fuel oil B, 1-399 gal., 5.5 cents; 400-799 gal., 4.5 cents; 800 gal. and over, 4.25 cents. Stanolex bunker C fuel oil, 1-999 gal., 4.25 cents; 1,000 gal. and over, 3.25 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Cons'r tank wag.	Gasoline: Dlr. divided dlr.	Gasoline: Incl. tax	Kero. tank wag.
Ohio points	15.5	14.5	5.0	*9.0

*Includes state tax of 1 cent.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Cons'r tank car	Gasoline: Dlr. tank wag.	Gasoline: Incl. tax	Kero. tank wag.
Atl'tic City, N. J.	11.6	12.7	4.0	8.4
Newark	11.6	12.7	4.0	8.4
Annapolis, Md.	13.35	14.35	5.0	9.5
Baltimore	12.75	13.75	5.0	9.0
Cumberland	14.15	16.15	5.0	10.0
Wash'gton, D. C.	11.00	12.00	3.0	9.5
Danville, Va.	14.95	17.45	6.0	11.5
Norfolk	13.75	16.25	6.0	11.0
Petersburg	14.05	16.55	6.0	11.7
Richmond	14.05	16.55	6.0	11.0
Roanoke	15.25	17.75	6.0	11.0
Charles'n, W. V.	14.55	17.05	6.0	12.6
Parkersburg	13.85	15.35	6.0	11.2
Wheeling	14.85	16.75	6.0	11.8
Charlotte, N. C.	16.90	16.50	7.0	11.8
Hickory	17.45	18.95	7.0	12.3
Mt. Airy	17.30	18.80	7.0	12.2
Raleigh	16.65	16.50	7.0	11.5
Salisbury	16.95	16.00	7.0	11.9
Charleston, S. C.	14.75	17.25	7.0	9.25
Columbia	15.60	18.10	7.0	11.5
Spartanburg	16.30	18.80	7.0	12.2

Price basis to Esso lene undivided dealers: Dealer tank-wagon price less 0.5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gal., consumer tank-wagon price at time and place of delivery; 100,000 gal. per year, consumer tank-car price plus 0.5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less 0.5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gal. or more, consumer tank-wagon price. Single deliveries of less than 50 gal., 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less 0.5 cent per gallon. The above policy also applies in South Carolina, effective January 23, 1939.

Discounts for kerosene, 1 cent off tank-wagon price for 25 gal. or more under contract (contract not necessary in Baltimore), except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Cons'r tank wag.	Gasoline: Net dlr.	Gasoline: Incl. tax	Kero. tank wag.
Atlanta, Ga.	17.5	17.5	7.0	11.0
Augusta	17.0	17.0	7.0	10.0
Macon	14.5	14.5	7.0	10.0
Savannah	16.5	16.5	7.0	9.0
Birmingham, Ala.	17.5	17.5	8.0	9.0
Mobile	18.0	18.0	9.0	8.0
Montgomery	19.0	19.0	9.0	9.0
Jackson, Miss.	16.0	16.0	7.0	10.0
Vicksburg	16.0	16.0	7.0	9.5
Jacksonville, Fla.	16.0	16.0	8.0	8.0
Miami	17.0	17.0	8.0	8.0
Pensacola	18.0	18.0	9.0	8.5
*Tampa	21.0	18.0	8.0	8.0
Lexington, Ky.	15.5	15.5	6.0	10.0
Covington	14.5	14.5	6.0	9.5
Louisville	14.5	14.5	6.0	9.0
Paducah	15.5	15.5	6.0	9.0

Price basis to tank-wagon consumers, effective January 4, 1937, 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

*Temporary discounts to tank-wagon consumers in Tampa 3 cents per gallon below consumer tank-wagon price on Crown gasoline.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline: Cons'r tank car	Gasoline: Dlr. tank wag.	Gasoline: Incl. tax	Kero. tank wag.
Albany	11.6	13.6	5.0	8.3
*Met. N. Y.: Manhat., Bronx, Queens, Brklyn., Staten Island	11.7	12.8	5.0	8.5
Buffalo	12.6	13.6	5.0	7.9
Rochester	12.8	13.5	5.0	8.5
Syracuse	12.2	13.4	5.0	8.8
Portland, Me.	11.6	13.0	5.0	8.5
Manchester, N.H.	12.3	12.0	5.0	8.9
Burlington, Vt.	12.1	14.4	5.0	8.7
Boston, Mass.	10.5	11.5	4.0	8.5
Worcester	11.1	11.6	4.0	8.0
Hartford, Conn.	10.9	11.5	4.0	8.4
New Haven	10.8	11.8	4.0	7.5
Providence, R. I.	10.5	11.75	4.0	8.5

*Does not include 2 per cent city sales tax, which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Effective February 15, 1939, the company changed its commercial consumer policy in New York and in New England points for tank-wagon delivery to the following: Annual purchases 10,000 gal. and under, tank-car price plus 2 cents per gallon; annual purchases 10,000 gal. up to 50,000 gal., tank-car price plus 1.5 cents per gallon; annual purchases 50,000 to 200,000 gal., tank-car price plus 1 cent per gallon; annual purchases 200,000 gal. and over, tank-car price plus ½ cent per gallon. Private consumers pay undivided dealer price, plus 2 cents per gallon. Private consumers receiving full compartment deliveries of at least 200 gal. receive a discount of ½ cent per gallon.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline: Cons'r tank car	Gasoline: Dlr. tank wag.	Gasoline: Incl. tax	Kero. tank wag.
Philadelphia, Pa.	12.0	13.5	5.0	10.5
Pittsburgh	13.0	14.5	5.0	10.5
Allentown	13.0	14.5	5.0	10.5
Erie	13.0	14.5	5.0	10.0
Scranton*	12.5	14.0	5.0	10.5
Altoona	13.0	15.0	5.0	10.5
Dover, Del.	...	14.0	5.0	10.5
Wilmington	...	13.5	5.0	10.0

Price basis to undivided dealers, dealer tank-wagon price less 0.5 cent per gallon.

Discount on kerosene, 2 cents per gallon off tank-wagon price on tank-wagon deliveries of 25 gal. or more at one time.

*Voluntary discount of 1 cent allowed to dealers only.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline: Tank truck	Gasoline: Serv. sta.	Gasoline: Incl. tax	Kero. tank wag.
San Francisco	16.0	17.0	4.0	11.5
Los Angeles	15.5	16.5	4.0	10.0
Fresno, Calif.	17.0	18.0	4.0	12.5
Phoenix, Ariz.	20.0	21.0	6.0	*17.5
Reno, Nev.	19.0	20.0	5.0	13.5
Portland, Ore.	18.5	19.5	6.0	13.5
Seattle, Wash.	18.5	19.5	6.0	13.5
Spokane	20.0	21.0	6.0	16.5
Tacoma	18.5	19.5	6.0	13.5

*Includes 5-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gal, and over, advance quantity discount extended at time of delivery, 3 cents. Service-station schedule applies on single deliveries less than 40 gal. On kerosene in tank-car, transport-truck, and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank wagon.

March 18, 1939, split dealer discount was canceled.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Dlr.	Gasoline: Incl. tax	Kero. tank wag.
Denver, Colo.	13.0	...	5.0	10.5
Grand Junction	17.5	...	5.0	12.5
Pueblo	14.0	...	5.0	9.0
Casper, Wyo.	16.5	...	5.0	11.5
Cheyenne	14.0	...	5.0	11.0
Billings, Mont.	18.0	...	6.0	12.0
Butte	16.0	...	6.0	13.0
Great Falls	18.0	...	6.0	12.0
Helena	16.0	...	6.0	12.5
Salt Lake, Utah	15.5	15.5	5.0	14.0
Boise, Idaho	21.1	21.1	6.0	16.0
Twin Falls	21.1	21.1	6.0	16.5
Albu'que, N. M.	13.5	...	6.5	10.0
Roswell	16.0	16.0	6.5	8.0
Santa Fe	17.5	17.5	6.5	10.0

*Includes city tax of 0.5 cent. †Includes state tax of 1 mill.

Tank wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Cons'r tank car	Gasoline: Dlr. tank wag.	Gasoline: Incl. tax	Kero. tank wag.
New Orleans, La.	13.75	16.25	8.0	†12.0
Baton Rouge	14.75	17.25	8.0	‡10.5
Alexandria	14.75	17.25	8.0	‡10.5
Lafayette	15.00	17.50	8.0	‡10.0
Lake Charles	14.75	17.25	8.0	‡10.0
Shreveport	13.50	16.00	8.0	‡9.0
Knoxville, Tenn.	18.00	19.50	8.0	12.5
Memphis	16.00	17.50	8.0	11.0
Chattanooga	17.50	19.00	8.0	12.0
Nashville	17.00	16.4	8.0	11.5
Bristol	18.25	17.50	8.0	12.0

Essolene at dealer price less 0.5 cent per gallon to undivided dealers.

†Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gal. or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gal. at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less 0.5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gal., consumer tank car plus 2 cents per gallon 50 to 199 gal., consumer tank car plus 1 cent per gallon; 200 gal. and over, consumer tank car plus 0.5 cent per gallon.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline: Tank wag.	Gasoline: Incl. tax	Kero. tank wag.
Texarkana, Ark	13.0	5.0	7.0
Fort Smith	14.5	5.0	7.5
Little Rock	16.75	7.5	8.0
Muskogee, Okla.	12.0	5.0	7.0
Oklahoma City	10.0	5.0	6.5
Tulsa	11.0	5.0	6.0

Tank wagon represents price to consumers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wag.	Gasoline: Dlr.	Gasoline: Incl. tax	Kero. tank wag.
Omaha	16.5	14.9	6.0	9.0
McCook	17.0	13.9	6.0	9.5
Norfolk	17.0	14.9	6.0	9.9
North Platte	17.3	14.5	6.0	10.2
Scottsbluff	17.9	15.0	6.0	10.5

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Texas

	Gasoline: Tank wag.	Gasoline: Dlr.	Gasoline: Incl. tax	Kero. tank wag.
Dallas, Tex.	11.0	15.0	5.0	7.0
Fort Worth	11.0	15.0	5.0	7.0
Houston	13.5	17.5	5.0	8.0
San Antonio	12.0	16.5	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	16.2
V.M.&P. naphtha	16.5
Cleaners' naphtha	15.5
Stanisol	15.5

*Prices include 3-cent Illinois tax but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gal. lots if covered by contract.

Canada*

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank wag.	Incl. tax	Kero. tank wag.
Halifax, N. S.	25.0	10.0	19.0
St. John, N. B.	25.0	10.0	19.0
Montreal, Que.	24.0	8.0	16.5
Toronto, Ont.	23.5	8.0	16.0
Hamilton, Ont.	23.5	8.0	16.0
Winnipeg, Man.	26.5	7.0	20.5
Brandon, Man.	28.0	7.0	22.0
Regina, Sask.	25.0	7.0	20.0
Saskatoon, Sask.	28.0	7.0	23.0
Edmonton, Alta.	25.9	7.0	20.0
Calgary, Alta.	23.0	7.0	18.0
Vancouver, B. C.	21.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. of Nebraska May 1 made the following changes in gasoline prices: Omaha, reduced tank-wagon 1 cent, advanced dealer 1.4 cents; McCook, advanced tank-wagon 1 cent and dealer 0.5; Norfolk, advanced tank-wagon 0.5 cent and dealer 0.4 cent; North Platte, reduced tank-wagon 0.5 cent, advanced dealer 0.5 cent; Scottsbluff, reduced tank-wagon 0.6 cent, advanced dealer 0.5 cent. Same date, advanced tank-wagon kerosene 0.5 cent in McCook and Scottsbluff, 0.4 cent in Norfolk, 0.2 cent in North Platte. May 28, made the following changes in gasoline prices: Omaha, advanced tank-wagon and dealer 1 cent; McCook, reduced dealer 0.5 cent; Scottsbluff, reduced dealer 1 cent.

(Continued on Page 111)

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted.

Prices as of June 4, 1940

The quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils. Octane ratings in Middle West, Mid-Continent, and Southwest are based on A.S.T.M. method of testing.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
72-74 octane (regular)	.04⅝	.04¾
63-66 octane	.04⅛	.04¼
60 octane and below	.03¾	.03⅞
60-62 400 grades:		
72-74 octane (regular)	.04⅝	.04¾
63-66 octane	.04⅛	.04¼
60 octane and below	.03¾	.03⅞

NORTH TEXAS—

U. S. Motor grades:		
72-74 octane (regular)	.04⅝	.04¾
63-66 octane	.04⅛	.04¼
60 octane and below	.03¾	.03⅞
60-62 400	.04¾	.03⅞

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
72-74 octane (regular)	.05⅛	.05⅜
63-66 octane	.04⅞	.04⅞
60 octane and below	.04¼	.04½

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
72-74 octane (regular)		.04¾
60 octane and below		.04

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
72-74 octane (regular)	.04¾	.04⅞
63-66 octane	.04⅝	.04½
60 octane and below	.04	.04⅛
60-62 400 grades:		
72-74 octane (regular)	.04¾	.04⅞
63-66 octane	.04⅝	.04½
60 octane and below	.04	.04⅛

PENNSYLVANIA (inland refineries)—

74-76 octane (regular)		.06
72-74 octane		.05¾
58-62 U. S. Motor	.04½	.05

CALIFORNIA (domestic movement)—

58-60 400, 65 oct. and higher	.06¾	.07½
54-58 U. S. Motor	.05½	.06½

EAST COAST (domestic)—

U. S. Motor, 65 and above:		
*New York (Bayonne)	.06	.06⅛
Philadelphia	.06	.06⅛
Boston	.06¼	.06½
Baltimore	.06	.06¼
Charleston, S. C.	.06½	.07

*All grades of gasoline ⅛ to ¼ cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
72-74 octane	.04½	.04⅝
70-72 octane (leaded)	.04⅝	.04½
68-70 octane	.04¼	.04⅜
65-67 octane		.04¼

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.01½
Grade 18-55	.01¾	.01⅞

NORTH TEXAS—

Grade 26-70		.01¼
Grade 18-55		.01½

CALIFORNIA—

75-85 375-390	.05¼	.05¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.01⅝

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110-flash, 540-550 e.p.	.03⅝	.03⅞
41-43 gr., 300-320 l.b.p., 110-125 flash, 500-520 e.p.	.03⅞	.04
46-48 gr., 210-230 l.b.p., 480-max., e.p.		.04

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43		.04
42-44		.04⅛

NORTH TEXAS—

41-43		.04

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04	.04⅛

ARKANSAS (Ark. and N. La. del.)—

41-43		.04⅛

PENNSYLVANIA (inland refineries)—

45	.05	.05⅛
46	.05⅛	.05¼
47	.05¼	.05⅜

CHICAGO (Based on Group 3)—

41-43	.04	.04⅛
42-44	.04⅛	.04¼

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04½	.05½

NEW YORK (Bayonne, N. J.)—

41-43	.05½	.06

GULF COAST (domestic)*—

41-43		.04½

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil		.03⅞
No. 1 prime white, 38-42	.03⅝	.03¾
No. 1 straw, 38-40	.03½	.03⅝
No. 2 straw, 32-36	.03⅜	.03½
No. 3 zero to 10, 28-32		.03¼

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅝	.03¾
No. 1 straw, 38-40	.03½	.03⅝

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36	.03	.03⅛

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36	.03¼	.03½

CHICAGO (Based on Group 3)—

Range oil	.03¾	.03⅞
No. 1 prime white, 38-40	.03⅝	.03⅞
No. 2 straw, 32-36	.03⅜	.03½
No. 3, zero to 15, 28-32	.03¼	.03⅜

NEW YORK (Bayonne, N. J.)—

*No. 1	.055	.060
*No 2	.047	.050
*No. 4	.047	.050

*Barge deliveries ⅛ to ¼ cent under above tank-car price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil, under 35	.02⅝	.02¾
No. 5, low pour point, 18-22	.72½	.77½
No. 6, 15 and above, 8-14	.47½	.52½

NORTH TEXAS—

U.G.I. gas oil, under 35	.02⅝	.02¾
No. 5, low pour point, 18-22	.72½	.77½
No. 6, 15 and above, 8-14	.47½	.52½

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.65	.70

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02⅞
No. 5, low pour point, 18-22	.75	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pour point, 10-16	.60	.70
No. 6, 15 and above, 10-16	.45	.55

PENNSYLVANIA (inland refineries)—

36-40		.04

CALIFORNIA—

30-40 gas oil, per bbl.	1.15	1.25
24 plus diesel, per bbl.	1.15	1.25
24 plus diesel (bunkers)	1.20	1.35
12-16 (bunkers at tidewater)	.65	.75
10-16 (cargo lots)	.65	.75
12-17 (tank cars)	.60	.75
10-17 (high sulfur)	.50	.65
San Joaquin Valley:		
10-18 (tank cars)	.50	.70
24 plus diesel, per bbl.	1.15	1.25
San Francisco:		
24 plus diesel, per bbl.	1.35	1.40
24 plus diesel (bunkers)	1.40	1.50
10-16 (bunkers)	.80	.85

GULF COAST—

No. 2 fuel	.03½	.03¾
43-47 diesel	.03⅞	.04
48-52 diesel		.04
53-57 diesel	.04	.04¼
58-and-above diesel	.04¼	.04½
Diesel bunkers		1.50
Bunker C (bulk cargoes)	.72	.80
Bunker C (bunkers)		.80

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil	.05	.052
28-30 diesel (lighterage 6¼c per bbl.)		1.95
28-30 diesel (tank cars)	.04⅝	.05
Bunker C (to ocean-going ships in N. Y. Harbor)		1.35
Industrial fuel (tank cars)	.033	.035

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

200-210 D, 10-25		.22
150-160 D, 0-10		.18
150-160 D, 10-25		.17½
100-110 D, 0-10		.17
100-110 D, 10-25		.16½
Steam refined:		
600 dark green (untreated)		.07½

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pour point		.21½
15 pour point		.20½
25 pour point		.19
Steam refined:		
600		.11
650		.13
600 flash		.15
630 flash		.16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

0-10 pour point:		
150-3		.10½
180-3		.11½
200-3		.12
250-3		.13
280-3		.13½
280-4		.13
300-3½		.14
350-3½		.14½
400-3½		.15
500-3½		.16
600-3½		.17
100-2½ paraffin oil, 10-25		.06¼
10-25 pour point:		
200-3		.11½
250-3		.12½
280-3		.13
280-4		.12½

GULF COAST—

Pale oils:		
100-3	.05½	.05¾
200-3	.07¼	.07½
300-3	.07¾	.08
500-3½	.08½	.09
750-3½	.09	.09½
1,200-3½	.09¾	.10
2,000-4	.10	.10¼
3,000-4	.12¼	.12½
Red oils:		
200-5-6	.07	.07¼
300-5-6	.07½	.07¾
500-5-6	.08¼	.08⅝
750	.08⅝	.09¼
1,200-5-6	.09⅝	.09⅝

CALIFORNIA (Moving to dom. market)—

Pale oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¾	.11½
450-5-6	.09¾	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pour point		.23
10 pour point		.22
15 pour point		.21
25 pour point	.19½	.20
200 vis. at 70° F., 3 color:		
Zero pour point		.25½
10 pour point		.24½
15 pour point		.23½
25 pour point	.21½	.22

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (A.m.p.) w.c. scale	.04½	.04¾

PENNSYLVANIA (inland refineries)—

122-124 (A.m.p.) w.c. scale		.04⅜
124-126 (A.m.p.) w.c. scale		.04⅝

NEW YORK—

Wax in bags fully refined:		
125-127 (A.m.p.) wax		.0630
128-130 (A.m.p.) wax		.0640
130-132 (A.m.p.) wax		.0660
133-135 (A.m.p.) wax		.0675
135-137 (A.m.p.) wax		.0800
Crude scale:		
124-126 (A.m.p.) w.s.		.04⅝
124-126 (A.m.p.) y.s.	.04⅜	.04⅛
Petrolatum in barrels, carload lots:		
Dark green	.02625	.03125
Amber	.02875	.03375
Extra amber	.03000	.03625
Lily white	.05125	.05875
Snow white	.06125	.06875
Cream	.04125	.04875

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.04¼	.04½
60-62 400	.04½	.05
61-63 390	.04¼	.05¼
64-66 375	.04¼	.04⅝

LOS ANGELES—

U. S. Motor grades:		
Above 69 octane	.06¼	.06½
65-69 octane	.05⅝	.06¼
60-65 octane	.05¼	.05⅝

KEROSENE

GULF COAST—

41-43 water white	.04½	.04⅝

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbl.)—

Cylinder stocks:		
600 S.R. unfiltered	.19	.20½
630 S.R. unfiltered	.20	.22½
600 flash, S.R.	.21	.23½
630 flash, S.R.	.26	.26½
Bright stock:		
Light, 25 pour point		.29

NEUTRAL OIL

200-3 color		.31
150-3 color		.29

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 A.m.p.		.06⅝
125-127 A.m.p.		.06⅞
128-130 A.m.p.		.07
133-135 A.m.p.		.07⅝
135-137 A.m.p.		.08¼
Crude scale:		
124-126 w.s.	.04⅝	.04¾
124-126 y.s.	.04⅝	.04¾

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (Oct. 11, 1938)* $1.10
Sinclair Prairie Oil Marketing Co. October 2, 1939. DeSoto Pipe Line October 2, 1939. Cities Service Co. October 5, 1939. Shell Oil, Inc., October 5, 1939.
Van, Tex. (Oct. 11, 1938)* $0.93
Talco, Tex. (Oct. 2, 1939)* ..... .65
Rodessa, Tex. .....
See North Louisiana gravity schedule
Cass and Panola counties, Texas .....
See note below
Altus and Tipton† .....See note below
Cayuga, Tex. (Oct. 2, 1939) $0.78
Clay Creek, Tex. ..... .85
Long Lake, Tex. (Jan. 20, 1940) .. 1.08

*Humble Oil & Refining Co. †Gulf Refining Co. Pure Oil Co.'s Van price, 93 cents, effective Oct. 13, 1938.

Cass and Panola counties, Texas, effective October 12, 1938, by Magnolia Petroleum Co., same as North Louisiana prices in Column 5 gravity schedule.

Altus and Tipton, Oklahoma, starting at below 25° at 71 cents, 2-cent spread to 40° and above at $1.03. Cayuga posted by Pan American Pipe Line Co. Clay Creek by Sun Oil Co. Long Lake by Sinclair Oil Marketing Co.

West Texas

See gravity table.
Fisher County, Texas (Apr. 1, 1939)
See note below
Pecos County (Oct. 11, 1938)* $0.78
Pecos shallow (Oct. 11, 1938)† .... .65

*Shell Oil Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Oil Co.

Fisher County, Texas, by Shell Oil Co., Inc., below 25°, 68 cents; 25°, 70 cents, with 2-cent spread to 40° and over at $1.

North Louisiana and Arkansas

Shreveport, La. (Sept. 7, 1939) $1.05
See note below
Smackover, Ark. (Oct. 5, 1938)* .... .73
Buckner, Magnolia, and Village, Ark. (Oct. 5, 1938)* .....See note below
Schuler, Jones sand (Sept. 13, 1939) .79
Schuler, Reynolds sand (Sept. 13, 1939) ..... .91
Tullos and Urania ..... .89
Cotton Valley, La. (distillate) (Dec. 23, 1938)* 1.20
Cotton Valley (Holloway sand) Dec. 16, 1939) 1.00
Lisbon, La. (Apr. 29, 1939) .....
See note below
Atlanta, Ark. (Sept. 13, 1939) ..... .93
Magnolia, Ark. (Sept. 13, 1939) .... .93
Dorcheat, Ark. (Feb. 10, 1940) 1.00
University, La. (Sept. 11, 1939) ...
See note below

*Smackover posted by Standard Oil Co. of Louisiana, Oct. 5, 1938; by Magnolia Petroleum Co., Oct. 12; by Gulf Refining Co., Oct. 13; McMillan Refining Co. and Cross Refining Co. met price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

The above Schuler, Atlanta, and Magnolia, Arkansas, flat prices posted by Lion Oil Refining Co. Shreveport flat prices posted by Caddo Crude Oil Purchasing Co. and Atlas Oil Corp.

Buckner, Magnolia, and Village, Arkansas prices effective Sept. 13, 1939, by Standard Oil Co. of Louisiana, start at below 25° at 63 cents, with 2 cents added for each degree up to 40 and over at 95 cents.

Effective Sept. 7, 1939, Standard Oil Co. of Louisiana posted gravity prices in Shreveport field beginning at below 25°, 73 cents; 25-25.9°, 75 cents, with 2 cents added for each degree up to 40 and over at $1.05. Dorcheat posted by Standard of Louisiana.

In the Lisbon, Louisiana, field, effective Sept. 14, 1939, Gulf Refining Co. and Caddo Crude Oil Purchasing Co. posted 27-27.9°, 66 cents, with 2 cents added for each degree up to 35 and over at 82 cents.

In the Baton Rouge (University) field, Louisiana, effective Sept. 11, 1939, Standard Oil Co. of Louisiana posted below 20° 79 cents, with 3 cents added for each degree upward to 26-26.9° at $1, and then 2 cents added for each degree up to 40 and over at $1.28. Posting discontinued Mar. 14, 1940.

Southwest Texas

Salt Creek, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)* $0.96
Pettus (Oct. 11, 1938)* 1.29
Flour Bluff (Dec. 3, 1938)* 1.23
Jim Wells County (Oct. 2, 1939)* .. 1.23
Darst Creek (Oct. 12, 1938)† ..... .96
Darst Creek and Bruner (Oct. 13, 1938)‡ ..... .96
Luling (Oct. 12, 1938)† ..... .87
Lytton Springs (Oct. 12, 1938)† .... .90
Mirando (Oct. 12, 1938)† .....
Government Wells (Oct. 13, 1938) ...
See note below

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20° at 77 cents, 3-cent spread to 24°-24.9° at 89 cents.

Gulf Coast

Sea Breeze, Willow Slough, and LaBelle, Tex. (Sept. 14, 1939)*** $1.10
Conroe, Tex. (Oct. 11, 1938)* 1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)† .....See note below
Gibson, La. (Oct. 11, 1938)† $1.04
Garden Island, La. (Oct. 12, 1938)‡ . 1.24
Lafitte, La. (Oct. 12, 1938)‡ 1.04
Cleveland, Tex. (Oct. 12, 1938)¶ 1.14
Hardin, Tex. (Sept. 14, 1939)* 1.10
Tepetate, La. (Oct. 11, 1938)§ 1.03
Villa Platte, La. (Oct. 11, 1938)§ 1.03
Abbeville, La. (Jan. 1, 1939)§ .....
See note below
Bosco, La. (Dec. 3, 1938)‖ $0.93
Creole, La. (Oct. 13, 1938)‖ ..... .96
Gueydan, Sweet Lake, and Louise, La. (Oct. 13, 1938)‖ ....See note below
Vinton, Edgerly, Starks, Hackberry, Timbalier Bay, Quarantine Bay, and Grand Bay, La. (Oct. 2, 1939)**
Segno and Wing (Oct. 2, 1939)**
See note below
Livingston (Oct. 11, 1938)† $1.10
Happytown, La. (Jan. 12, 1940)† .. 1.00

*Humble Oil & Refining Co. †Shell Oil Co., Inc., ‡Texas Co. §Continental Oil Co. ‖Pure Oil Co. ¶Magnolia Petroleum Co. **Gulf Refining Co. ***Sun Oil Co. Hardin prices by Humble and Sun companies.

Black Bayou, etc., starts at below 20° at 79 cents; 20°-20.9°, 81 cents; 21°-21.9°, 83 cents; then a 3-cent spread to 26°-26.9°, 98 cents; then a 2-cent spread to 40° and over at $1.14. Abbeville starts at below 36°, 92 cents, 2-cent spread to 40° and over at $1.02. Gueydan, etc., starts below 20°, 79 cents, 3-cent spread to 26°-26.9° at $1, and 2-cent spread to 40° and over at $1.28. Segno and Wing take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 20°, 86 cents, 2-cent spread to 34° and above at $1.16. Shell Oil Co. withdrew as a purchaser in the Schwab-Wilcox area, Texas, on Apr. 8, 1940.

Hackberry, East and West, effective October 2, 1939, by Stanolind Oil & Gas Co. Below 20 gravity 86 cents, 2 cents added for each degree up to 34° and over at $1.16.

In the Bunkie and Eola pools in Loui-

Crude Prices by Gravities

Gravity—	Oklahoma and Kansas [1]	Oklahoma and Kansas [2]	Oklahoma and Kansas [3]	North and Central Texas [4]	Louisiana and Arkansas [5]	East Central Texas [6]	Gray County, Texas [7]	Carson and Hutchinson Counties, Texas [8]	West Texas, and Lea County, N. M. [9]	Raccoon, Satsuma, and Tomball, Texas [10]	Gulf Coast [11]	Anahuac, Dickinson, Texas [12]	Refugio, Texas [13]	Mirando-Duval, Beaumont-West Beaumont, Texas [14]	Golden Meadow, Louisiana [15]	Lockport, Iowa, Cameron Meadows, Louisiana [16]	Bunkie and Eola, Louisiana [17]	Artesia, Jackson, Maljamar, N. M. [18]
Below 18	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	$.74	...	...
18-18.9	...	...	...	...	...	...	...	...	$.53	...	...	...	...	...	...	.76	...	...
19-19.9	...	...	...	...	...	...	...	...	.53	...	$.86	$.81	$.91	$.86	...	.78	...	...
20-20.9	...	$.70	...	$.60	...	...	...	...	.55	...	.88	.83	.93	.88	...	.80	...	...
21-21.9	...	.72	...	.63	...	...	...	...	.57	...	.90	.85	.95	.90	...	.82	...	...
22-22.9	...	.74	...	.66	...	...	...	...	.59	$.95	.92	.87	.97	.92	...	.85	...	...
23-23.9	...	.76	...	.69	...	$.78	...	...	.61	.97	.94	.89	.99	.94	...	.88	...	...
24-24.9	...	.78	...	.72	$.71	$.73	.80	...	.63	.99	.96	.91	1.01	.96	$.90	.91	...	...
Below 25	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	$.83	...
25-25.9	...	.80	$.58	.75	.73	.75	.82	...	.65	1.01	.98	.93	1.03	.98	.90	.94	.85	...
26-26.9	...	.82	.63	.78	.75	.77	.84	...	.67	1.03	1.00	.95	1.05	1.00	.90	.97	.87	...
27-27.9	...	.84	.68	.81	.77	.79	.86	...	.69	1.05	1.02	.97	1.07	1.02	.90	.99	.89	...
28-28.9	...	.86	.73	.84	.79	.81	.88	$.72	.71	1.07	1.04	.99	1.09	1.04	.90	1.01	.91	$.61
29-29.9	...	.88	.78	.87	.81	.83	.90	.74	.69	.73	1.09	1.06	1.01	1.11	1.06	.90	1.03	.93	.63
30-30.9	...	.90	.82	.90	.83	.85	.92	.76	.71	.75	1.11	1.08	1.03	1.13	1.08	.90	1.05	.95	.65
31-31.9	...	.92	.86	.92	.85	.87	.94	.78	.73	.77	1.13	1.10	1.05	1.15	1.10	.92	1.07	.97	.67
32-32.9	...	.94	.90	.94	.87	.89	.96	.80	.75	.79	1.15	1.12	1.07	1.17	1.12	.94	1.09	.99	.69
33-33.9	...	.96	.96	.96	.89	.91	.98	.82	.77	.81	1.17	1.14	1.09	1.19	1.14	.96	1.11	1.01	.71
34-34.9	...	.98	.98	.98	.91	.93	1.00	.84	.79	.83	1.19	1.16	1.11	1.21	1.16	.98	1.13	1.03	.73
35-35.9	...	1.00	1.00	1.00	.93	.95	1.02	.86	.81	.85	1.21	1.18	1.13	1.23	1.18	1.00	...	1.05	.75
36-36.9	...	1.02	1.02	1.02	.95	.97	1.04	.88	.83	.87	1.23	1.20	1.15	1.25	1.20	1.02	...	1.07	.77
37-37.9	...	1.04	1.04	1.04	.97	.99	1.06	.90	.85	.89	1.25	1.22	1.17	1.27	1.22	1.04	...	1.09	.79
38-38.9	...	1.06	1.06	1.06	.99	1.01	1.08	.92	.87	.91	1.27	1.24	1.19	1.29	1.24	1.06	...	1.11	.81
39-39.9	...	1.08	1.08	1.08	1.01	1.03	1.10	.94	.89	.93	1.29	1.26	1.21	1.31	1.26	1.08	...	1.13	.83
40 and over	...	1.10	1.10	1.10	1.03	1.05	1.12	.96	.91	.95	1.31	1.28	1.23	1.33	1.28	1.10	...	1.15	.85

Column 1—Effective October 17, 1938, by Standard Oil Co. of Indiana. By Gulf Refining Co., October 13, 1938. Carter Oil Co. schedule and prices same from 30° upward, but on lower gravities pays below 21° 60 cents, with 3 cents added for each degree up to and including 29-29.9°, effective October 13, 1938. Gulf Oil Corp. starts at below 25° 78 cents, October 13, 1938. Texas Co. schedule starts at 28-28.9° at 86 cents. Pure Oil Co. same as Standard of Indiana's schedule, effective October 14, 1938.

Column 2—Sinclair Prairie Oil Marketing Co. February 16, 1939.

Column 3—Magnolia Petroleum Co. effective October 12, 1938; Shell Petroleum Corp., October 22, 1938; Shell Oil Co., Inc., April 1, 1939.

Column 4—Effective December 3, 1938, by Humble Oil & Refining Co. in Central Texas. By Magnolia Petroleum Co. in East Central and in North and Central Texas, excepting that it starts at below 29° at 79 cents, effective December 3, 1938. Texas Co. in North and Central Texas, same as Magnolia's but effective October 12, 1938. Gulf Refining Co. same as Magnolia's, effective October 13, 1938. Sinclair Prairie Oil Marketing Co. same as Magnolia's, effective October 5, 1939. Stanolind Oil Purchasing Co., in Cooke and Montague counties, schedule starts at below 21°, 60 cents, with a 2-cent spread upward to 40° and over at $1, effective October 17, 1938.

Column 5—Standard Oil Co. of Louisiana, effective October 5, 1938. Met by Gulf Refining Co. October 13; met by Texas Co. October 12.

Column 6—Humble Oil & Refining Co., October 11, 1938.

Column 7—Humble Oil & Refining Co., effective December 3, 1938. Sinclair Prairie Oil Marketing Co., October 11, 1938. Texas Co. quotes "Panhandle sweet crude," beginning with 34-34.9°, at 84 cents, with 2-cent spread to 40° and over at 96 cents, and "Panhandle sour crude," 79 cents for 34-34.9°, with a top of 91 cents for 40° and over, effective October 12. Magnolia Petroleum Co. met Humble prices throughout, effective December 3. Gulf Refining Co. quotes "Panhandle sweet crude" at below 29°, 72 cents with a 2-cent spread, and a top price of 96 cents for 40° and above, and "Panhandle sour crude" below 29°, 67 cents, with a top of 91 cents for 40° and above effective October 13. Phillips Petroleum Co. schedule for sweet crude in Gray, Carson, and Hutchinson counties, starts at below 29°, 72 cents, with a spread of 2 cents up to 96 cents for 40° and over, effective February 7, 1939.

Column 8—Humble Oil & Refining Co., effective December 3, 1938. Sinclair Prairie Oil Marketing Co., October 11, 1938. Texas Co. quotes "Panhandle sweet crude" at 34-34.9°, 84 cents, with a top of 96 cents for 40 gravity, and "Panhandle sour crude" at 34-34.9°, 79 cents, with a top of 91 cents for 40° and over, effective October 12. Gulf Refining Co. quotes "Panhandle sweet crude" at below 29°, 72 cents, with a top of 96 cents for 40° and over and "Panhandle sour crude" at below 29°, 67 cents, with a top of 91 cents for 40° and above, effective October 13. Phillips Petroleum Co. schedule for sour crude in Carson, Moore, and Hutchinson counties, starts at below 29° at 67 cents, with a spread of 2 cents up to 91 cents for 40° and over, effective February 7, 1939.

Column 9—Humble Oil & Refining Co., effective October 11, 1938. Texas Co. schedule starts at below 26°, 65 cents, and ends at 36° and over at 87 cents, effective October 12. Gulf Refining Co. starts at below 26° at 65 cents and ends at 40° and over at 95 cents, effective October 13. Magnolia Petroleum Co. schedule starts below 25°, 63 cents, and ends at 40° and above at 95 cents, effective October 12. Sinclair Prairie Oil Marketing Co. schedule same as that of Magnolia, effective October 11, but revised on March 24, 1939, to stop at 36° and over at 87 cents. Stanolind Oil Purchasing Co. schedule same as that of Humble, effective October 11. Stanolind Oil & Gas Co. (Winkler County) starts at below 26°, 65 cents, with a 2-cent spread, and a top of 85 cents for 40° and above, effective October 11, 1938. Effective September 1, 1939, Shell Oil Co., Inc., posted Yoakum County crude, starting at below 20°, 53 cents, with 2 cents added for each degree up to 36° and over at 87 cents. Effective March 31 Atlantic Refining Co. added Gaines County to its price schedule.

Column 10—Humble Oil & Refining Co., effective October 11, 1938. Magnolia Petroleum Co., in Tomball, effective October 12.

Column 11—Effective October 2, 1939, by Humble Oil & Refining Co. in Texas Coast. By Sinclair Prairie Oil Marketing Co. in Texas Coast, October 3, 1939. By Texas Co. at $1.16 in Texas and Louisiana Coast, October 2, 1939, schedule stopping at 34° and over. By Sun Oil Co. in Texas and Louisiana Coast, October 2, 1939. By Gulf Refining Co. in Louisiana October 2, 1939, excepting that schedule stops at $1.16 for 34° and above. By Gulf Refining Co. in Texas, effective November 1, 1939.

Column 12—Effective by Humble Oil & Refining Co. October 2, 1939. By Sun Oil Co. in Anahuac, October 2, 1939. By Gulf Refining Co. in Anahuac, October 2, 1939. On November 1, 1939, Gulf Refining Co. applied these prices to Anahuac, Hull (New), Pierce Junction, Orange, Thompson (deep).

Column 13—Effective October 2, 1939, by Humble Oil & Refining Co. and Continental Oil Co. By Texas Co. up to 28° and over at $1.09 October 2, 1939. Atlantic adopted Humble price schedule November 7, 1939, in Refugio and applied it also to Greta.

Column 14—Effective October 2 by Humble Oil & Refining Co. By Sun Oil Co. in Mirando alone, stopping at 24-24.9° at 96 cents. By Stanolind Oil & Gas Co. in West Beaumont, alone, October 2, 1939. Gulf Refining Co. in West Beaumont, October 2, 1939. By Magnolia Petroleum Co. in Beaumont, October 2, 1939. By Texas Co. in Duval and Mirando, stopping at 28-28.9° at $1.09. Continental Oil Co. in Mirando and Duval, October 2, 1939.

Column 15—Effective October 2, 1939, by Texas Co.

Column 16—Magnolia Petroleum Co., effective October 12, 1938.

Column 17—Standard Oil Co. of Louisiana, effective October 23, 1939.

Column 18—Continental Oil Co., effective October 11, 1938.

siana, effective October 23, 1939, by Standard Oil Co. of Louisiana, below 25° 83 cents, 2 cents added for each degree up to 40° and over at $1.15.

Iowa, La., effective October 11, 1938, by Shell Petroleum Corp. and on April 1, 1939, by Shell Oil Co., Inc.: Below 18°, 75 cents; 18°-18.9°, 77 cents; 2-cent spread to 21°-21.9° at 83 cents; then a 3-cent spread to 26°-26.9° at 98 cents; then a 2-cent spread to 34° and above at $1.14.

Middle Western States

OHIO OIL CO.
(Effective June 8, 1939)

Illinois old fields	$0.95
Illinois basin	1.05
Princeton, Ind.	.95
Western Kentucky (June 9, 1939)†	.90
Birk City, Ky. (June 9, 1939)¶	.90
Corydon, Ky. (June 9, 1939)	.90
Greendale, Porter, Crystal and Wise, Mich. (Oct. 9, 1939)*‡	1.02
Buckeye, Bentley, Edenville, Beaverton, Mich. (Oct. 9, 1939)*	1.00
Freeman-Redding, Mich. (Oct. 9, 1939)†	.97
Arenac, Mich. (Oct. 9, 1939)*	.82
West Branch, Mich. (Nov. 1, 1939)*	.85
Allegan-Kent and Ottawa, Mich. (Apr. 27, 1940)	1.08
Bloomingdale and Columbia, Mich. (Apr. 27, 1940)¶	1.08
Muskegon	1.00
Sherman and Freeman, Mich. (Oct. 9, 1939)‡	.97
Eastern Kentucky:	
Big Sandy River (June 9, 1939)†	1.02
Kentucky River (June 9, 1939)†	1.10

*Simrall Corp. †Ashland Refining Co. ‡Pure Transportation Co. §Imperial Refining Co. ¶Sohio Oil Co. Bloomingdale posted by Tri-Lakes Corp. Kent County by Naph-Sol Refining Co. Effective Feb. 1, 1940, Sohio Corp. posted $1.05 per barrel in the Centralia, Salem, and Louden fields for crude up to 30 bbl. per well per day. In the McClosky lime fields of Clay, Wayne, and Noble counties it posted $1.05 per barrel up to 40 bbl. per well per day. For all oil produced in exces of the above figure in any of the fields named it posted $1 per barrel. On May 25, 1940, Sohio posted $1 per barrel in the Griffin field in Gibson County, Indiana, and Wabash County, Illinois, and the North Griffin, South Griffin, Phillipstown, New Harmony and Irons in Wabash and White counties, Illinois. In the Salem field in Illinois, effective March 13, Canyon Pipe Line posted $1.05 per barrel for the first 40 bbl. per well and 90 cents per barrel for oil in excess of 40 bbl. per well. Allegan, Kent, and Ottawa posted by Commonwealth Pipe Line Co.

Rocky Mountain States

Dry Creek, Wyo. (Oct. 11, 1938)*	$0.92
Elk Basin, Wyo. (Oct. 11, 1938)*†	.90
Grass Creek, light, Wyo. (Oct. 11, 1938)*†	.90
Grass Creek, heavy (Oct. 11, 1938)†	.40
Lance Creek, Wyo. (Oct. 11, 1938)*	.77
Rock Creek, Wyo (Oct. 11, 1938)*	1.00
Iles, light, Colo. (Oct. 11, 1938)†	.98
Iles, heavy, Colo. (Oct. 11, 1938)†	.92
Dutton Creek, Wyo. (Oct. 11, 1938)†	See note below
Frannie, light, Wyo. (Oct. 11, 1938)†	$0.55
Frannie, heavy, Wyo. (Oct. 11, 1938)†	.42
Hamilton dome, Wyo. (Oct. 11, 1938)†	.35
Midway, Wyo. (Oct. 11, 1938)†	See note below
Salt Creek Tensleep Crude, Wyo. (Oct. 11, 1938)†	$0.646
Salt Creek (Oct. 11, 1938)	See note below
Canon City, Colo. (Oct. 11, 1938)‡	$0.90
Florence, Colo. (Oct. 11, 1938)‡	.90
Cut Bank, Mont. (Jan. 1, 1940)	1.00
Kevin-Sunburst, Mont. (Jan. 1, 1940)	.80
Cat Creek, Mont. (Oct. 11, 1938)‡	1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡	.98
Lance Creek, Wyo. (Oct. 11, 1938)‡	.77
Lea County, New Mexico	See West Texas gravity schedule‡
Artesia, Jackson and Maljamar	See gravity table‡
Fort Collins and Wellington, Colo.	See note below
Eddy County, New Mexico (Oct. 11, 1938)§	$0.77

*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. §Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crudes start at below 29°, 86 cents, 2-cent spread up to 40° and over at $1.10. Salt Creek crude, excepting Tensleep, takes Standard Oil Co. of Indiana's Oklahoma-Kansas prices. Stanolind Oil & Gas Co., effective Oct. 11, discontinued posting prices in Greybull-Torchlight, Wyoming, and Hogback and Hospah, New Mexico. In Fort Collins and Wellington, Colorado, effective Oct. 11, 1938, by Continental Oil Co. 28-28.9°, 81 cents, with 2 cents added for each degree up to 40° and over at $1.05. Cut Bank and Kevin-Sunburst posted by Producers Refining Co.

Eastern States

SOUTH PENN OIL CO.
(Effective Jan. 1, 1940)

Pennsylvania Grade oil in National Transit lines (Bradford field)	$2.50
Pennsylvania Grade oil in Southwest Pennsylvania lines	2.15
Pennsylvania Grade oil in Eureka Pipe Line lines	2.09
Corning grade oil in Buckeye Pipe Line Co. line (Nov. 4, 1939)	1.12

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO.
(Effective Jan. 1, 1940)

Bradford, Pa.	$2.50
Allegany, N. Y.	2.50

PENNZOIL CO.
(Effective Jan. 1, 1940)

Group A	$2.43
Group B	2.42
Group C	2.41
Group D	2.40
Group E	2.38

PURE OIL CO.
(Effective Jan. 1, 1940)

West Virginia	$2.09

QUAKER STATE OIL REFINING CORP.
(Effective Dec. 1, 1939)

Southern Ohio (Pa. Grade)	$2.05

Canada

ONTARIO
(Nov. 6, 1939, by Imperial Oil, Ltd.)

Petrolia	$2.10
Oil Springs	2.07
Bothwell	2.10

TURNER VALLEY
(Jan. 5, 1938, by Imperial Oil, Ltd.)

Clear naphtha and discolored naphtha, 65° and higher	$2.14
Discolored naphtha and crude oil, 40°-40.9°	1.14
Increasing 2 cents for each degree gravity with top price for 64°-64.9°	1.62

These prices f.o.b. producers' field tankage.

Rocky Mountain Runs

Production estimates for week ended June 1:

WYOMING

	Bbl.
Salt Creek	16,080
Big Muddy	1,180
Badger Basin	240
Black Mountain	200
Byron	4,220
Cole Creek	150
Dallas Derby	400
Frannie	2,760
Garland	3,470
Hudson	240
LaBarge	1,360
Lance Creek	23,300
Lost Soldier	1,980
Mahoney	250
Medicine Bow	760
Mule Creek	200
Oregon Basin	4,330
Osage	600
Quealy Dome	490
Rock River	2,540
Wertz	1,990
Miscellaneous	440
Total Wyoming	67,150

MONTANA

Kevin-Sunburst	5,290
Border	70
Cat Creek	520
Cut Bank	10,580
Dry Creek	790
Pondera	690
Total Montana	17,940

COLORADO

Iles Dome	1,470
Florence	200
Fort Collins and Wellington	340
Wilson Creek	640
Moffat	280
Greasewood	20
Rangely	70
Tow Creek	130
Price	140
Total Colorado	3,290

NEW MEXICO

Arrowhead	2,790
Cooper	2,890
Eaves	580
West Eunice	250
Eunice	17,590
Halfway	160
Hardy	2,530
Hobbs	10,230
Jal	390
Langlie	4,400
Lynch	200
Lynn	790
Mattix	4,800
Monument	19,130
North Lynch	10
Penrose	3,820
Rhoades	90
Skelly	1,560
South Eunice	2,330
South Lovington	1,390
Vacuum	11,820
Artesia-Maljamar	19,150
Aztec-Bloomfield	10
Getty	100
Hogback	200
Rattlesnake	370
Table Mesa	70
Total New Mexico	107,650

Permits for Oil Line Strongly Opposed

WASHINGTON, D. C., June 3.—W. J. Holloway, Oklahoma City attorney representing Gov. Leon C. Phillips, before a Senate subcommittee considering a bill to require permits for interstate pipe lines, said the industry "could more effectively meet a new emergency if not handicapped by legislation. What is needed is fewer hindrances and restrictions."

J. O. Seth, Santa Fe attorney representing New Mexico, also opposed the bill. Pres. J. C. Hunter of Mid-Continent Oil and Gas Association, described the proposed regulation today as an attempt to divert business to the railroads. He said, "There is no demand among oil producers for such a law and they have no problem which it would either solve or ameliorate. We do not know of any demand for its passage in the public interest."

The bill would require pipe-line companies to obtain certificates of convenience and necessity from the I.C.C. before commencing construction of lines.

STANDARD OIL CO. OF CALIFORNIA

Crude-oil prices at the well effective February 1, 1940

(All gravities above those quoted take highest price offered in that field)

Gravity—	Signal Hill (Long Beach) (El Segundo)	Wilmington	Seal Beach	Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier East Coyote (La Habra)	Montebello	West Coyote Hills	Santa Fe Springs	Greeley-Canal	Cole's Levee Richfield Western	Mountain View	Elk Hills	Buena Vista, Midway-Sunset, Lakeview	Lost Hills	Coalinga	Kettleman Hills
14-14.9	$.65	$.60	$.64	$.63	$.64	$.65	$.61	...	$.65	$.61	$.61	$.62	$.63	...	...	...	..	$.60	$.60	$.60	$.60	...
15-15.9	.65	.60	.64	.63	.64	.65	.61	...	.65	.61	.61	.62	.63	...	...	...	..	.60	.60	.60	.60	...
16-16.9	.65	.60	.64	.63	.64	.65	.61	...	.65	.61	.61	.62	.63	...	...	...	..	.60	.60	.60	.60	...
17-17.9	.65	.62	.64	.63	.68	.65	.61	...	.65	.61	.61	.62	.63	...	...	...	..	.60	.60	.60	.60	...
18-18.9	.65	.64	.64	.63	.71	.65	.65	...	.68	.61	.61	.62	.63	...	...	...	..	.60	.60	.60	.60	...
19-19.9	.69	.69	.64	.67	.75	.70	.69	...	.72	.61	.65	.62	.63	...	...	...	$.60	.64	.64	.64	.61	...
20-20.9	.73	.73	.64	.72	.79	.76	.74	...	.75	.65	.69	.62	.67	...	...	...	.60	.69	.69	.69	.62	...
21-21.9	.78	.78	.64	.76	.82	.81	.78	...	.79	.69	.73	.62	.72	$.63	...	...	.64	.74	.74	.74	.66	...
22-22.9	.82	.82	.69	.81	.86	.86	.82	...	.82	.73	.77	.66	.76	.63	...	...	.68	.79	.79	.78	.70	...
23-23.9	.86	.86	.75	.85	.89	.92	.86	$.71	.86	.78	.82	.71	.81	.67	...	...	.71	.84	.84	.82	.74	...
24-24.9	.90	.90	.80	.90	.93	.97	.90	.77	.89	.82	.86	.75	.85	.72	...	...	.75	.89	.89	.86	.78	...
25-25.9	.95	.95	.86	.94	.96	1.02	.95	.82	.93	.86	.90	.80	.89	.77	...	...	.79	.94	.94	.90	.82	...
26-26.9	.99	.99	.91	.99	1.00	1.08	.99	.88	.96	.90	.94	.84	.94	.82	...	...	.83	.99	.99	.95	...	...
27-27.9	1.03	1.03	.97	1.03	1.04	...	1.03	.94	1.00	.94	.98	.89	.98	.87	$.83	$.92	.87	1.04	1.04	.99	...	...
28-28.9	1.07	1.07	1.02	1.07	1.07	f.o.b.	1.07	.99	1.03	98	...	.93	1.02	.91	.86	.96	.91	1.09	1.09	1.03	...	...
29-29.9	1.10	1.10	1.07	1.11	1.10	our	1.10	1.04	1.06	1.02	...	.98	1.06	.96	.90	.99	.95	1.14	1.14	1.07	...	...
30-30.9	1.14	1.14	1.12	1.15	1.14	pipe	1.14	1.09	1.09	...	...	1.02	1.10	1.01	.94	1.02	.99	1.19	1.19	1.11	...	...
31-31.9	...	...	...	...	1.17	line	1.17	1.14	...	...	...	1.07	1.14	1.05	.98	1.06	1.02	1.24	1.24	...	...	...
32-32.9	...	...	...	...	1.20	...	1.20	1.19	...	...	...	1.11	1.18	1.09	1.02	1.09	1.06	1.29	1.29	...	...	...
33-33.9	...	...	...	...	...	...	...	1.24	...	...	...	1.15	1.22	1.14	1.06	1.13	1.10	1.34	1.34	...	...	$1.12
34-34.9	...	...	...	...	...	...	...	1.29	...	...	...	1.20	1.26	1.19	1.10	1.16	1.14	...	...	...	...	1.17
35-35.9	...	...	...	...	...	...	...	1.34	...	...	...	1.24	...	1.23	1.14	1.20	...	...	...	...	...	1.21
36-36.9	...	...	...	...	...	...	...	1.39	...	...	...	1.28	...	1.27	1.18	1.23	...	...	...	...	...	1.25
37-37.9	...	...	...	...	...	...	...	1.44	...	...	...	1.33	...	1.31	1.22	1.26	...	...	...	...	...	1.29
38-38.9	...	...	...	...	...	...	...	1.49	...	...	...	1.37	...	1.36	1.25	1.30	...	...	...	...	...	1.33
39-39.9	...	...	...	...	...	...	...	1.54	...	...	...	1.42	...	...	1.29	1.34	...	...	...	...	...	1.38
40-40.9	...	...	...	...	...	...	...	1.59	...	...	...	1.46	...	...	1.33	1.37	...	...	...	...	...	...
41-41.9	...	...	...	...	...	...	...	...	...	...	...	1.50	...	...	1.37	1.40	...	...	...	...	...	...
42-42.9	...	...	...	...	...	...	...	...	...	...	...	1.54	...	...	1.41	1.44	...	...	...	...	...	...
43-43.9	...	...	...	...	...	...	...	...	...	...	...	1.59	...	...	1.45	1.47	...	...	...	...	...	...
44-44.9	...	...	...	...	...	...	...	...	...	...	...	1.63	...	...	1.49	1.51	...	...	...	...	...	...
45-45.9	...	...	...	...	...	...	...	...	...	...	...	1.67	...	...	1.53	1.54	...	...	...	...	...	...
46-46.9	...	...	...	...	...	...	...	...	...	...	...	1.71	...	...	1.57	1.57	...	...	...	...	...	...
47-47.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.61	...	...	...	...	...	...	...
48-48.9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1.64	...	...	...	...	...	...	...

For Newhall, McKittrick, Kern River, Round Mountain and Kern Front crude, Standard posts 60 cents per barrel for all grades. For Elwood Terrace crude (free on board ship), 33-33.9, $1.21, with 4 cents added for each degree up to and including 37° and over at $1.37; Wheeler Ridge crude, 19 to 21.9°, 60 cents; 22-22.9, 63 cents; 23-23.9, 67 cents; 24-24.9, 71 cents; 25° and over, 75 cents. On May 18, Union Oil Co. adopted Standard of California prices in all fields in which they both purchase.

EQUIPMENT PROGRESS...

FRICK-REID-AXELSON STORE TYPICAL OF PROGRESSIVE TREND

Typical of the trend toward neatness and working efficiency is the Frick-Reid-Axelson supply field store at Oklahoma City. Realizing the necessity of carrying adequate stocks of deep-well plunger pumps and fittings, as well as modern pump-servicing equipment, the two companies—Frick-Reid Supply Co., Tulsa, and Axelson Manufacturing Co., Los Angeles, Calif.—started last year the modernization campaign which has been carried into practically all of the 63 field stores affected.

J. C. Axelson, president of Axelson, said: "The day has passed when field stores handling deep-well plunger pumps and sucker rods can carry one of each part in stock. Now it is essential to have an adequate reserve."

Mr. Axelson pointed out that the days when pumps were assembled on an ordinary workbench with the aid of a pipe vise have passed. "Precision manufacture makes it imperative that modern pumps be serviced by trained store men using modern equipment," he said. "The accurate fitting of plungers, liners, and other pump parts must be done systematically and efficiently."

Synchronizes Pumps on Wells of Varying Producing Capacity

The Kork Kelley adjustable stroke regulator for oil-well jacks, introduced by Kork Kelley, Wichita Falls, Tex., is designed to synchronize the operation of pumps on wells of varying production capacity.

Two wells on adjacent leases may produce 5 and 25 bbl. of oil, respectively. The regulator makes possible a short stroke for production from the 5-bbl. well and a long stroke for the 25-bbl. well. Thus they may be operated from a power engine which has an invariable stroke.

If all wells are pumped with same length of stroke, the wells making smaller quantities of fluid are pumped down sooner than heavier producers. If the smaller wells are hooked off the power, there is lack of balance in the power source.

In most cases these smaller wells are left on the power until all wells are pumped off, resulting in the

increase of damaging sands in the pumping gear and escape of essential gases from the well.

Continuous operation with a Kork Kelley regulator is said to prevent accumulation of sand, destruction of pumping apparatus, paraffin trouble and escape of gases.

By keeping the oil at a constant level, the regulator makes maximum production possible. With the level lower the oil from the well's reservoir flows into the production area.

Star Drilling Machine's Spudder Built to Handle Complete Job

The Star Drilling Machine Co. of Akron, Ohio, announces the new No. 243 Star spudder. Designed to

handle the complete job, it is recommended particularly for top-to-bottom drilling, tailing-in after rotary, and cleaning out. Outstanding features are a correct, snappy drilling motion; a long, effective stroke; fast pulling and bailing, and carefully engineered counterbalance. The three chain-driven reels are large and fast.

Large bearings contribute to long life. Controls are convenient and promote safety. Air-cooled brakes, Star's exclusive mud-sill mast and traveling spudder sheave, double crank drive and double shock-absorbers, and built-in instantaneous reverse are other important features. The No. 243 may be had in four models.

TRADE LITERATURE

WESTINGHOUSE ELECTRIC & MANUFACTURING CO., Department 7-N-20, East Pittsburgh, Pa.—12-page bulletin (26-645) on a.c. and d.c. crucible-weld Flexarc welding electrodes.

THE ATLAS LUMNITE CEMENT CO., Chrysler Building, New York.—24-page booklet on refractory concrete, containing conductivity charts showing comparative insulating values of several types of refractory concrete.

CHRYSLER CORP., DODGE DIVISION, Detroit, Mich.—Catalog of Dodge-diesel job-rated heavy-duty trucks.

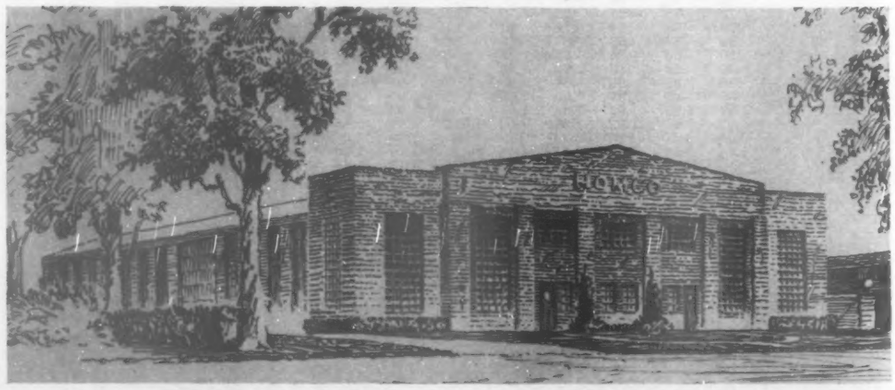
NORTON CO., Worcester, Mass.—Current issue of Grits and Grinds, featuring article on grinding of stainless steels.

B. F. GOODRICH CO., Akron, Ohio.—New catalog section on Plastikon rubber putty, which resists corrosive chemicals, chemical fumes, salt spray, etc.

LUKENS STEEL CO., Coatesville, Pa.—132-page manual on spun heads for pressure vessels and other equipment in the oil industry, with valuable engineering data.

UNION WIRE ROPE CORP., Kansas City, Mo.—Rope Dope, educational bulletin on abuses of wire rope.

MARMON-HERRINGTON CO., Inc., Indianapolis Ind. —Bulletin on use of all-wheel-drive trucks in the oil industry.



Construction has begun on an office building and plant for the cutting and fishing-tool division of Houston Oil Field Material Co. in Wayside Drive, Houston, Tex. The new building, which will cover a space 100 by 150 ft. and represent an outlay of $75,000, is scheduled for completion about July 1.

AMONG EQUIPMENT MEN...

New Posts for Rogers and Reed in Cooper-Bessemer Organization

The Cooper-Bessemer Corp., maker of gas and diesel engines and compressor units, has made John Rogers Pacific Coast manager with offices in Los Angeles,

JOHN ROGERS *J. W. REED*

Calif. Simultaneously, J. W. Reed has been transferred from Los Angeles to the New York offices as Atlantic Coast manager of the company's gas-engine and compressor division.

Mr. Reed joined Cooper-Bessemer in 1924 and was made Pacific Coast sales manager in 1929. He goes to New York with a wide experience in the application of the company's engines and compressors to petroleum, natural-gas, and general industries power uses.

Mr. Rogers graduated from the University of Southern California school of mechanical engineering in 1911. He joined the Frank J. Kimball Co., an organization devoted to oil-field and irrigation engineering, and was made vice president and secretary. In 1916 he became affiliated with Ingersoll-Rand Co. as engineer, with sales duties. In 1933 he was appointed chief engineer of the oil-field division, continuing in that position until he resigned recently to join Cooper-Bessemer.

Richardson Is Manager in Dallas

A. I. Richardson has been appointed manager of Allis-Chalmers Manufacturing Co.'s district office in Dallas, Tex. He was previously in Charlotte, N. C.

Mr. Richardson is a native of Texas, attended the public schools at McKinney, and graduated in mechanical engineering from Texas A. & M. College. He entered the employ of Allis-Chalmers in 1925, spending two years in the shops before preparing for sales-engineering work. Since then he has had a wide experience in the company's district offices in Atlanta, Ga.; Chattanooga, Tenn., and Charlotte, N. C.

BUSINESS NOTES

Oil Industry Appliance Co., Patterson-Ballagh Corp., and Gulf Coast Machine & Supply Co. have removed their New York offices to 92 Liberty Street.

W. E. Fletcher, sales manager of the tank division of Gar Wood Industries, Inc., Detroit, Mich., spoke on "Safe Tank-Truck Design and Equipment" at the Petroleum Industries session of the Michigan State-Wide Safety Conference in Lansing. The conference was sponsored by the Michigan Petroleum Industries safety committee.

Dr. Howard A. Smith, until recently research metallurgist with the Rustless Iron & Steel Co., Baltimore, Md., and previously in charge of stainless-steel development in the laboratories of Republic Steel Co. in Canton, Ohio, has been made chief metallurgist of the Duraloy Co., Scottdale, Pa.

C. R. Hale has been appointed purchasing agent for Air Reduction Co., 60 East Forty-second Street, New York, and its subsidiary and affiliated companies. Mr. Hale, a Columbia graduate, joined the purchasing department in 1925 and had been assistant purchasing agent since 1936. He succeeds H. M. Daggett, who retired.

National Transit Pump & Machine Co., Oil City, Pa., has appointed Tunnell, Wood & Nellan, Inc., 2068 East Thirty-seventh Street, Los Angeles, Calif., as its agent for southern California. The latter company will warehouse a stock of Transit pumps, engines, and repair parts.

Roller-Smith Co., Bethlehem, Pa., has transferred its switchboard division to a recently acquired plant in Allentown, Pa. The air and oil circuit breaker and instrument divisions will remain in Bethlehem.

Cyrus L. Philipp has been assigned to supervise operation of the entire refrigerator and stock-car fleet of General American Transportation Corp., Chicago. Mr. Philipp, who is a vice president, will retain his office in Milwaukee, Wis., and will have an office in Chicago also.

Northern Equipment Co., Erie, Pa., has appointed Meleney Engineering Co., Mills Building, Washington, D. C., district representative for Copes feed-water regulators, differential valves, pump governors, desuperheaters, pressure-reducing valves, and allied equipment.

J. Wilford (Bill) Connolly is now Griscom-Russell Co. sales engineer, with an office in the Thompson Building, Tulsa. He formerly was in the New York offices of the company and handled sales of G-R equipment with Abrahamson Corp., Buffalo, N. Y.

C. B. Boyne has been appointed manager of stainless sales by the Allegheny Ludlum Steel Corp. His headquarters will be in the company's general offices in Pittsburgh, Pa. He has been with the organization since 1913 and until the recent change he was manager of stainless bar and wire sales.

American Phosphate & Manufacturing Corp., with its staff of water-treating engineers, has moved its offices from Sand Springs, Okla., to 416 South Kenosha Avenue, Tulsa.

George E. Gude, Jr., sales manager for Wyatt Metal & Boiler Works, Houston, Tex., has returned from a 6 weeks' business trip in the North and East, including stopovers in Pittsburgh, Cleveland, New York, Boston, Chicago, and Hamilton, Ontario. He was accompanied by Mrs. Gude, the former Maxine Bennet, of New York.

The Gaso Pump & Burner Manufacturing Co. has added 7,500 sq. ft. of floor space to its main manufacturing plant at First and Lansing streets, Tulsa, through purchase of a property immediately south of the company's site. The added space will be utilized for a warehouse.

The American Brake Shoe & Foundry Co. has made W. A. Blume president of the American Brakeblok Division. He has been connected with the company 25 years and since 1926 has been vice president in charge of production and engineering of the brake-lining business.

Chicago Bridge & Iron Co. Changes

The following transfers in the Chicago Bridge & Iron Co. sales departments have been announced: S. C. Hamilton, district sales manager in Birmingham, Ala., to Houston, Tex.; R. A. Williams, who has been handling the sale of Morse filter plants, to Dallas, Tex., office; H. F. Stearns, from New York as district sales manager in charge of the Birmingham territory; A. H. Heineman from New York to Birmingham sales department; Herbert A. Guerin from Cleveland to New York office; George Jewett from Chicago to New York office; Ray Menefee from Chicago engineering department to Cleveland office; William Fickett from Chicago drafting room to the Chicago sales office; Kenneth Sandbach from Hillside erection office to Philadelphia sales office.

Two New Assistant Managers Are Named by Jones & Laughlin

Appointment of two assistant managers of wire-products sales, D. J. Henecker for wire rope and C. E. Kendall for wire and galvanized sheets, is announced by Jones

D. J. HENECKER *C. E. KENDALL*

& Laughlin Steel Corp., Pittsburgh, Pa. The wire-rope sales division has been consolidated into the wire-products division under J. E. Timberlake, present manager of wire-products sales.

Mr. Henecker in 1922 was employed in the New York warehouse of American Steel & Wire Co. He was appointed manager of wire-rope promotion sales in New York in 1930. A year later he was made assistant sales manager of the eastern division. In 1932 Mr. Henecker became Wickwire Spencer Steel Co.'s assistant sales manager and later sales manager of the Buffalo district. In 1937 he was appointed general manager of wire-rope sales for the United States, and, in addition in 1939, became sales manager for all products of the eastern district, which position he held when he joined J. & L.

Mr. Kendall has been with J. & L. in the wire-sales department since February 1939. Before that he was with Pittsburgh Steel Co. for 20 years. In 1923 he became assistant manager of the company's Chicago office, which position he held until 1928 when he was transferred to Pittsburgh as assistant manager of the fence department. He was made manager of that department in 1930. In 1935 he became manager of the merchant-products sales department in Pittsburgh, the position he resigned to enter the service of J. & L.

E. R. Smith Off for South America

E. R. Smith, of Lane-Wells Co.'s export sales department, Los Angeles, Calif., left for a 60-day trip through the Colombia, Venezuela, and Trinidad oil fields, following the International Petroleum Exposition in Tulsa. He first was to visit the company's New York office and then embark for Miami, Fla., the entire trip being made by air. The return trip will be through Central America and Mexico.

Watts Wins Chapman Valve Prize

The Chapman Valve Co., Indian Orchard, Mass., announced that the winner of its contest held at the International Petroleum Exposition was Frank A. Watts, purchasing agent for the Humble Oil & Refining Co. in Houston, Tex. The prize, $500 cash, was awarded to the individual making the most nearly correct estimate of the number of times a Chapman valve appeared in a lighted window at its exhibit. Tabulations were made on a sealed mechanical counter and on the last day of the show it was found that Mr. Watt's estimate of 190,830 missed the actual number of 190,842 by 12.

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703 Central Tower Building
San Francisco, Calif.

KENTUCKY OIL PRODUCTION
FOR SALE
2 wells fully equipped and producing on 51 acres of land near Fordsville, Kentucky, priced for immediate sale. Write Rietman Company, 905 Atlas Bank Building, Cincinnati, Ohio.

WANTED: Reliable partner to carry half interest 240 acre lease, Kentucky field. 650 to 700 ft. Several wells in area; oil and gas. Others drilling; locations staked for more. Ready market for gas; grand opportunity for 42-gravity oil. Address 907 S.E. Third St., Evansville, Ind.

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Los Angeles, Calif.

GIVE 800 acres leases, very meritorius location, for 700 ft. well, six sands, Kansas, premium oil market. Roy B. Edmundson, Caney, Kansas.

Leases and Drilling Blocks

EAST TEXAS Paluxy-Trinity sand wildcats now drilling others starting shortly afford you chances for quick money. Leases close in. E. CROFT, Proctor, Tex.

PRODUCER OR INVESTOR ATTENTION, we have an oil structure leased which has been mapped by Frederick G. Clapp leading Geologist of the Nation. It parallels an uplift he formerly mapped now worth 20 million dollars. He states he has high opinion of this structure for production. We are in sight of wells that blow in as high as 2000 to 5000 barrels at 3300 feet. Would you like to drill or help drill this property, we can offer you a great opportunity, reports and maps will be sent without obligation, also highest references. Address Box 572, Chickasha, Okla. Telephone 220 and 2352.

5 YR. oil loans. $50,000 to $5,000,000. On production, oil payments, royalties, real estate. Low interest. Inquiries invited. L. A. (Pat) Casey, Esperson Bg., Houston; Nat. Bk. Com. Bg., San Antonio; Dan Waggoner Bg., Ft. Worth.

FOR SALE OR LEASE, preferably sale at a bargain, a large deposit of High Grade Fullers Earth and Bentonite, located on T.&N.O. Railway at Lena, Fayette County, Texas. T. E. Melcher, El Campo, Texas.

FOR SALE: Oil lease, located Bowling Green, Ky. 10 producing wells and locations. Norman O'Brien, 830 W. Drayton Ave., Ferndale, Mich.

WILL SELL 35 acres oil lease in Sec. 14, Claremont, Twnshp., Richland County, Ill. Chosen drilling site. G. Hedelin, Grand Rapids, Mich.

FOR SALE: Royalty on 880 acres lying on trend between two producing oil and gas fields, located Barber County, Kansas. Production within two miles. Major company now drilling approximately center tract. Call or write Riley MacGregor, Medicine Lodge, Kansas

FOR SALE: 10 acres Johnston Co., Okla. NW¼ of NW¼ of SE¼, Sec. 19, Twp. 2S, Range 8 East. Margaret S. Barry, 3505 Legation St. N.W., Washington, D. C.

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Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

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When all other methods fail, employ my divining or dowsing method. If oil exists this method finds it. Faults, broken treacherous areas accurately defined. Our Watson #2, first producer Wilmington, Calif. field, located by this method. More reliable than mechanical geophysics. Ask any unbiased oil authority. Many years' experience. A wise man investigates. George Miller, 1548 Post, Torrance, California.

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WHY? Drill a dry hole? Our method only locates structures which contain oil or gas. Locations made by us will produce or no pay. Write Drawer 711, Brownsville, Texas.

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ROYALTY Owners, Oil Investors, Unit Holders, Stockholders in Oil, Royalty and Mining Companies. Personnel lists of every branch of oil industry. All by states. We buy or swap lists. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Okla.

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3 Lines	$1.05	$1.80	$2.55	$3.30
4 Lines	1.40	2.40	3.40	4.40
5 Lines	1.75	3.00	4.25	5.50
6 Lines	2.10	3.60	5.10	6.60
7 Lines	$2.45	$4.20	$5.95	$7.70
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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

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EXTREME BARGAIN PRICE on limited quantity Used Casing Shoes. All good as new. 5⅞" at $7.50; 6¼" and 6⅝" at $9.00; 8¾" at $12.00; also 12½", 13⅜" and 15½" at very low prices. Bridgeport Machine Company, Wichita, Kansas.

WIELAND PIPE THREADERS
Exceptional opportunity to purchase 4, 6, 12 and 18-inch little used machines in fine condition with perfect dies.
CHAS. F. WIELAND
199 Hillcrest Rd., Berkelev. Calif.

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FOR SALE

10,000 Ft. 2½" seamless tubing, used in flowing wells only.

10,000 Ft. 7" O.D. 26# seamless casing, once run.

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In addition to the above we have 20,000 Ft. screw line pipe in Oklahoma; also drilling rig capable of drilling to 6500 feet, complete stock of line pipe, casing, drilling and pumping equipment.

Wire, Write or Phone for Prices.

Louisiana Iron & Supply Co.
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Have been pumping in deep wells that are being abandoned. ¾'s and ⅞'s in A-1 condition. Save 50% or more on rods. AL BROWN SUPPLY CO., Box 841, Kilgore, Tex.

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Complete Late Type Cracking Unit

2500 bbl. thruput cracking—6000 bbl. topping and cracking. Original cost $600,000.00—Units complete in every respect. Turbine driven hot oil pumps.

Priced for immediate sale. Will dismantle and load for reerection or

Will take turnkey job for dismantling and reerection your site.

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W. C. Berry and H. J. Galamba
Riverview at Second, Kansas City, Kansas

Robt. W. Duden
2100 S. Union, Tulsa, Oklahoma

FOR SALE: Cable tool drilling machine complete except for tools, including steel derrick and 120 H.P. Clark drilling engine, located near Graham, Texas. Address Box 1098, Shawnee, Okla.

5W Bucyrus-Monighan Diesel Walker Dragline 100 foot boom, 6-yard bucket.
45B Bucyrus-Erie Diesel Dragline, 65 foot boom, 2-yard bucket.
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150 P&H Dragline, 30 foot boom, ½-yard bucket with trailer.
D8 Caterpillar Tractor with Bulldozer.
All in splendid operation condition. Completed contracts. Priced to Sell. Address Box K-630, The Oil and Gas Journal, Tulsa, Okla.

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FOR SALE
COMPLETELY RE-CONDITIONED EQUIPMENT
18" x 10' Q.C. Lathe, Taper Attch. $600.00
165 H.P. 2 cyl. Bessemer Gas Engine 1,450.00
30" Upright belt drive drill press 135.00
200 ton Upright Hydraulic Press 250.00
4" retipped seamless boiler tubes pass state inspection.
CHICKASHA IRON WORKS
Chickasha, Oklahoma.

OVERHAULED MUD PUMPS: Two 12x6¾x16" Type F Johnson Gumbo Busters and one 15"x7¾x18" Lucey. All have been overhauled and have new Pistons, Rods, Liners and Valves. Close out price: $300 each. Worth twice this amount. In stock at Corpus Christi. Bridgeport Machine Company, Wichita, Kansas.

FOR SALE: Two 6" Union Tool unitized draw works and one 20" Johnson Rotary table, at a bargain. Address: Acme Salvage Co., Longview, Texas.

TRACTORS
Government crawler type Caterpillar size "35" $375; size "65" with nigger head winch $750; Trailbuilder Cletrac "55" with bulldozer $2000; Allis-Chalmers Model L with bulldozer $1750. All slightly used, overhauled, guaranteed. O. C. EVANS, Mount Sterling, Kentucky.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St., Cincinnati, Ohio

FOR SALE: 7 ft. x 20 ft. Butane welded storage tanks 125# WP, capacity 6000 gallons. I.T.I.O. Co., Bartlesville, Okla.

FOR SALE

MILLER IMPROVED 85 H.P. TWIN CYLINDER NATURAL GAS ENGINE—EXCELLENT CONDITION. WILL SACRIFICE FOR IMMEDIATE DISPOSAL.

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JOHN MORRIS, Box 5411, Philadelphia, studied records 5000 financial houses. Found only 191 buy new issues. $4.00.

Help Wanted

SALES ENGINEER, with oil field machinery experience, by large supply company. Location Tulsa. Must be capable of direct selling and office detail work. Two years college engineering education minimum requirement. Advancement opportunities unlimited. Detail past experience and education in first letter, enclosing small photograph if available. All replies treated confidentially. Address Box K-645, The Oil and Gas Journal, Tulsa, Okla.

WANTED—SALES REPRESENTATIVE
To sell well-known line of carbon and alloy steel castings and cast steel specialties, Crane Wheels, Conveyor Chain, Sprockets, Elevator Buckets, and similar parts. In reply advise lines you are now handling, district covered and previous business experience. Address Box K-644, The Oil and Gas Journal, Tulsa.

Situations Wanted

OIL ACCOUNTANT, thoroughly familiar with all phases of drilling and oil company accounting and taxation, 15 years' experience, desires new connection with progressive firm. 35 years old; conscientious; welcome responsibilities. Box K-623, The Oil and Gas Journal, Tulsa, Oklahoma.

REFINERY PROCESS SUPT. Graduate chemical engineer. 10 yrs.' supervisory experience with major oil company. Lube Oil specialist. Address Box K-633, The Oil and Gas Journal, Tulsa, Okla.

YOUNG man executive ability refinery pilot plant experience. B.S. Gas Engineering desires job. West Coast or South America. Address Box K-605, The Oil and Gas Journal, Tulsa, Oklahoma.

YOUNG, vigorous, capable, imaginative, personable executive, now employed, seeks new connection demanding hard work with aggressive Southern or Western organization. Unimpeachable references testify to unusually extensive experience in sales promotion, credit sales, treasury and specialized activities in the oil industry. Address Box K-643, The Oil and Gas Journal, Tulsa, Okla.

PRODUCTION AND DRILLING SUPERINTENDENT with several years' major company experience would like to join independent company, drilling contractor or individual. Can take full charge of your operations. Address Box K-642, The Oil and Gas Journal, Tulsa, Okla.

OIL ACCOUNTANT, 17 years' experience drilling, production, refining, taxation, desires new connection with progressive firm. Address Box K-641, The Oil and Gas Journal, Tulsa, Okla.

YOUNG MAN, GRADUATE ENGINEER, 5 years' production experience desires salaried position with small company or independent operator but would try selling. Will go anywhere. Address Box K-640, The Oil and Gas Journal, Tulsa, Okla.

Investment Wanted

MANUFACTURER or Sales organization to distribute exclusively, a new, radically different, drill bit proved 25% to 65% more efficient than the fish tail, in all formations and depths. Liberal terms. Kless, 414 Stratford St., Houston, Texas.

Tank-Wagon Changes

(Continued from Page 104)

Standard Oil Co. of Louisiana May 23 reduced dealer tank-wagon gasoline 1.1 cents in Nashville; May 24, reduced consumer tank-car gasoline 1 cent in New Orleans; same date reduced dealer tank-wagon gasoline 0.25 cent in Bristol.

Standard Oil Co. of California May 28 reduced tank-truck and retail-gasoline prices 1.5 cents throughout California, Oregon, Washington, Nevada, and Arizona, except in certain portions of eastern Washington, Oregon, Nevada, and Arizona, where the decreases take into consideration reductions previously made to meet competition.

Continental Oil Co. May 29 advanced tank-wagon and dealer gasoline 1 cent in Pueblo.

Standard Oil Co. (Indiana) May 24 reduced tank-wagon kerosene 0.5 cent in Wichita; May 27, advanced tank-wagon gasoline 1.5 cent in Fargo; May 28, advanced dealer gasoline 0.5 cent in Grand Rapids.

Socony-Vacuum Oil Co., Inc., May 23 reduced dealer tank-wagon gasoline 0.9 cent in Buffalo and 1.3 cents in Rochester; May 24, reduced dealer tank-wagon gasoline 0.6 cent in Syracuse and 2.5 cents in Manchester.

Gulf Coast Markets

(Continued from Page 103)

of refinery products from Gulf Coast ports, notably terminals of the larger companies, to the Atlantic seaboard. It has been indicated that this material is not going immediately into the trade, but rather is being accumulated in eastern storage.

Further weakening of fuel and burning oils was indicated during the week with increasing supplies of material evidently available.

Kerosenes also were slightly easier with no important trading, but buyers evidently were satisfied with the 4½-cent price generally quoted.

Coastal lubricating-oil quotations are being maintained fairly consistently. It was reported that competitive material was making itself felt but generally coastal supplies are still in fair shape.

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Wedge Protectors, Inc.
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Well Surveys, Inc.
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